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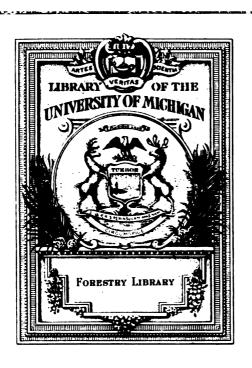
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BIENNIAL REPORT

1915-16

OF THE

STATE CONSERVATION COMMISSION

OF WISCONSIN

FOR THE YEARS 1915 AND 1916



MADISON, WIS.

Cantwell Printing Co., State Printer
1916

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COMMISSIONERS

JAMES NEVIN, Chairman	Term expires February, 1921
W. E. BARBER	Term expires February, 1919
F. B. Moody	Term expires February, 1917
B. S. Scheibel, Secretary.	

LETTER OF TRANSMITTAL

Honorable Emanuel L. Philipp, Governor of Wisconsin.

Sir:—In conformity with law, we have the honor to transmit the report of this department for the fiscal years ending June 30, 1916.

JAMES NEVIN,
W. E. BARBER,
F. B. MOODY,

Commissioners.

R. S. Scheibel, Secretary.

COMMISSIONERS' REPORT.

Pursuant to statutory direction, we take pleasure in submitting our first biennial report. The report involves a rather unusual situation. Although it covers the two fiscal years ending June 30, 1916, this commission did not come into actual control until August 1, 1915. Thus, the first thirteen months of the biennial period were under the individual administration of the several departments combined to create this commission, and officially we are only responsible for the last eleven months of the period mentioned. We, therefore, feel that we should necessarily be brief as to the administrations during the aforesaid months, and confine our remarks to a financial statement. Chairman Nevin of this commission having long been active as superintendent of fisheries under the old commissioners of fisheries, we are able to include complete information covering the old fisheries department.

By provisions of Chapter 406, Laws of 1915, this commission succeeded to all the powers and duties of the Forestry Board, State Park Board, Conservation Commission, Commissioners of Fisheries and the State Fish and Game Warden Department. The intent and effect was to consolidate under one head all the closely related duties and problems of administration over forest and stream, fish and game, and to give powerful impetus to the conservation of the natural resources of the Badger State.

So that the public may better understand the actual meaning and result of the consolidation we have prepared the following statement:

Salaried positions and honorary appointments under old departments

State Park Board State Forestry Board Commission of Fisheries Fish and Game Warden Conservation Commission Office clerks and stenographers	none 2 2 2 2 none	Non-salaried 3 5 7 none 7 none
Total	14	22

Salaried positions and appointments under new department

Commissioners and secretary Office clerks and stenographers	4 5	none
Total	9	none

It will be noted that the consolidation resulted in reducing the number of salaried officers, clerks and stenographers from 14 to 9, and incidentally 22 members of boards and commissions were dispensed with. The saving in salaries in the administration end of the work, however, is of minor

importance in the resultant economy. To this must be added the traveling expenses of the 22 commissioners. Under the old system each of the five departments issued its own annual or biennial report, a separate expense for the printing of stationery and office forms, and for postage, office supplies and equipment—five departments of state, all drawing from the public exchequer in practically a duplication of expenditures. The old forestry board, state fish and game warden and fish commission each occupied separate offices. The actual saving to the state cannot be placed at less than from ten to twelve thousand dollars.

Most important, however, is the increased efficiency in the services rendered the state. Politics has been absolutely abolished in our reorganization and a demand was made for strict attention to the work of our several divisions and particularly in the activities to conserve the wild life of the state. There is nothing so contaminating to efficient service of a department of this nature as political servitude. This commission is proud to say that our first instruction to every employee was that efficient service would be the measure of his tenure in office, and that his citizen's rights were matters of his individual preference. In making appointments to this department we adhere at all times to the State Civil Service laws. These policies have been strictly adhered to and will be as long as the present commissioners are at the head of this department.

Under the old régimé the state sustained five departments, all working entirely independently of one another, although the activities of all were so closely related that the work of one department overlapped or interwove with that of another. One department is now administering the affairs of five, and three men, who devote their entire time and attention, instead of twenty-six honorary commissioners, are responsible for the proper administration of the state's business along those particular lines.

Because of restrictions placed upon the activities of the old forestry board by the Supreme Court prior to the creation of this commission, the work on the forest reserves has been confined, chiefly, to that of protecting all state lands north of Town 33 from fire and trespass, the sale of dead, down, dying and mature timber, the maintenance of two forest nurseries, the sale of planting stock therefrom, surveying and leasing islands and lake lots, and other work incident to the proper care and protection of the property.

As the decision of the Supreme Court in no way affected the management of the state park properties, we have actively continued the improvement, care and operation of the several state parks as far as available funds would permit.

Joint resolution No. 32 passed by the 1915 legislature places with us the duty of presenting to the 1917 legislature a revision and codification of all fish and game laws. Pursuant to this action by the legislature, we immediately started investigations. After due notice was published, meetings were held with commercial fishermen at the following ports:

At Sheboygan on February14,	1916,	77 fishermen present.
At Green Bay on February15,	1916,	151 fishermen present.
At Sturgeon Bay on February16,	1916,	103 fishermen present.
At Oconto on February17,	1916.	46 fishermen present.

These meetings were held for the purpose of gaining some knowledge directly from the licensed fishermen, on which to base our recommendations as to laws covering the commercial fishing industry on Lake Michigan and Green Bay. Five hundred and ten typical fishermen-men who have followed fishing in outlying waters for years—were present. If space would permit, we would like to print the minutes of the six meetings mentioned above, so that the reader might appreciate the varied and diversified ideas and opinions held by the fishermen. Not only do the fishermen of Sheboygan disagree with the fishermen of the other five ports (the same being true at all the meetings), but, also, the fishermen working out of the same port disagree among themselves. Hook fishermen say the poundnet and gill-net men are wrong, and vice versa. At the Sheboygan meeting arguments were made in favor of $2\frac{1}{2}$, $2\frac{3}{6}$, $2\frac{3}{6}$, $2\frac{3}{6}$, 4, $4\frac{1}{6}$ and 5 inch mesh for catching trout. The gist of the situation is that we, after a careful consideration of all the information secured, must present such a revision of the fish and game laws as we deem best and proper.

We take pleasure in commenting on the interest and vigor shown by the employees in the several divisions of this commission. It is refreshing to find an existing condition in that all our employees feel that they are all members of one big family, that their interests are all in common, and that they are working for a common cause—for the good of the department.

We wish to express the appreciation of this commission for the help and cooperation by the railroad companies in the distribution of fish planted in public waters. This assistance is invaluable in the final operations of our hatcheries. The rapid and expeditious transportation of the fish cans, the willing attitude of the railroads and their employees to assist whenever possible, are of great help in making our work a huge success.

We are also indebted to the Biology Department of the University of Wisconsin for assistance in problems that are of a more scientific nature. The University has always responded in a spirit most willing to assist us whenever possible.

The commissioners express to Mr. Arthur F. Belitz, assistant revisor of statutes, their thanks for the aid given in the revision and codification of the state fish and game laws.

BUDGET FOR BIENNIAL PERIOD ENDING JUNE 30, 1919.

Requested Appropriation: (Annual)	
For General Operation	\$200,000.00
For Repairs and Maintenance	
For Property and Improvements	13,000.00
Total	\$226,000.00

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General Operation. (\$200,000.00)

This expenditure includes all items of salaries, labor, supplies and traveling expenses. The amount is \$30,112.54 below the total disbursements by the former Forestry Board, Park Board, Fish Commission and State Game Warden during the last year that these departments operated independently. The amount is practically the same as the amount expended for the purpose during our first year of operation. The amount is sufficient but we cannot properly administer the affairs of state under our direct supervision on a less amount. It is the same appropriation as given by the Legislature of 1915.

Repairs and Maintenance. (\$13,000.00)

This expenditure includes the upkeep of all properties under our care, i. e., repairing of roads, all tools and equipment, painting and repairing of all buildings, and the upkeep of all hatchery ponds, raceways and pipe lines. Our inventory shows we have property and equipment representing an investment of \$632,744.00. Being state property it is always expected to present the best possible appearance. Practically all of the ninety odd buildings need painting, many need a new roof, many miles of park roads need repairs, and the state boats, launches, engines and other equipment need overhauling.

For this purpose the Legislature of 1915 made an appropriation of but \$5,000. It was the amount asked for the fish hatcheries alone and the approximate amount usually given that department. In the hurry during the last days of the session the amount was not changed and no provision was made for the parks, forestry and warden divisions. As a consequence some of our necessary upkeep work was left undone.

The amount asked for provides for the forestry, park, warden and fisheries divisions.

Property and Improvements. (\$13,000.00)

This expenditure includes the erection of new buildings, building of new roads, new hatchery ponds, raceways or pipe lines, and the purchase of new tools or equipment. With 457,200 acres of land and property values amounting to over \$630,000.00 under our control, it will be readily appreciated that the amount we ask for is not excessive.

The 1915 Legislature appropriated \$4,600 for this purpose but the same is true as to the repairs and maintenance appropriation as explained above. It was only sufficient for the needs of the fisheries division.

Conclusion.

The total appropriation is some \$26,000.00 less than the amount disbursed during the fiscal year ending June 30, 1915. It will also be noted that during the last fiscal year this department turned \$227,261.40 into the treasury of the state of Wisconsin. We anticipate that the present year will see an increase of from ten to fifteen thousand dollars as last year the sale of hunting licenses was quite below the average, also the return on rough fishing was low. The commission is more than self-sustaining.

RECOMMENDATIONS.

That all moneys collected by this department from the sale of licenses, confiscations, wardens' fees, proceeds from fishing contracts, concessions, leases (except Federal Grant Islands) or derived from any other source in the general administration of this department, be deposited with the state treasurer and be credited to what shall be known as the "State Conservation Fund." That an appropriation be made for the administration of our work in the usual manner. The surplus in the Conservation Fund over and above our appropriation or disbursements may be expended by this commission, with the consent of the State Emergency Board, for any special purpose such as additional equipment, new buildings, new hatcheries or hatchery ponds, property improvements or increasing the warden force at any particular period. Such money to be used for any of our work with the exception of road work or improvement work on state parks. The said Conservation Fund to be cumulative and nonlapsible.

FISHERIES DIVISION.

To reënact subsection 4 of section 172-22, statutes of 1913, providing a fund for the rescue of fish from the land-locked sloughs and bayous adjacent to the Mississippi river. This fund was repealed, unintentionally, by section 22, chapter 607, laws of 1915. At the time the repeal went into effect, August 26, 1916, the fund contained \$9,843.36. The fund should be re-established with an appropriation of \$10,000.00.

To place a law in the statutes, prohibiting the pollution of our inland waters through the cheese, condensed milk and canning factories carrying the refuse from their operations into the lakes and streams. This department to cooperate with the State Board of Health in the carrying out of the provisions of such law.

PROTECTION OF FISH AND GAME.

Pursuant to joint resolution number 32 by the legislature of 1915, we have prepared a complete revision and codification of the state fish and game laws and the same will be submitted to the legislature of 1917 in the form of a bill. We have spent a great deal of time in study and securing information on which to base this revision and we sincerely trust that the legislature of 1917 will bear in mind that our recommendations are the results of almost two years of study and research.

We herewith mention some of the most important changes we endorse:

1. A general open and close season over the entire state for all varieties

of wild animals. Repeal the many special county laws.

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- A close season over the entire state on partridge, grouse and prairie chicken.
- Change the open season on wild birds from September 7 to September 26 and extend the season to December 31.
- 4. Change form of hunting license to smaller size and omit the deer coupons. Deer coupons to be furnished at an extra fee of 50 cents. Reason—out of 160,000 licenses sold only about 35,000 are used for deer hunting. Thus 125,000 licenses are printed, each with three coupons, which are never used for deer hunting. This will reduce the printing cost 50 per cent to 60 per cent and be more convenient for hunters and county clerks.
- 5. Reduce the limit of daily catch of trout from 45 to 25.
- 6. Prohibit the sale of black bass and muskellunge.
- 7. Provide a trapper's license for taking fur bearing animals.
- 8. To increase the nonresident fishing license fee from \$1.00 to \$2.00. The nonresident hunting license for small game from \$10.00 to \$25.00 and for small game including deer \$50.00. That we issue a resident trout fishing license at a fee of \$1.00.
- 9. Reduce the nonresident hunters' bag limit to the same as a resident hunter.
- 10. Change game farm license law to omit muskrat.
- 11. Change opening day for taking black bass from May 29 to July 1.
- 12. Place a daily bag limit on all varieties of game fish.
- Change the sunrise and sunset law by allowing shooting 20 minutes before sunrise or after sunset.
- 14. A law as to the establishing of wild life refuges.
- 15. A law providing for the forfeiture of any license for the season for which it is issued, if the holder is found guilty of a violation.
- 16. Increase all penalties. Principally—\$300 for the use of dynamite in killing fish, \$100 for having venison in possession out of season, \$200 for shipping game to market, \$300 for serving venison in railroad or lumber camps, hotels or summer resorts.
- 17. An absolute close season for all fishing in Green Bay and Lake Michigan from October 20 to November 31 inclusive.
- 18. No pound nets to be used in Green Bay during the month of April.
- 19. Repeal all laws as to outlying waters and stipulate a minimum gill net of 2½ inches stretch measure. Regulate the taking of fish according to size stipulating in the law the minimum size of each variety of fish that may be had in possession. Have a law that any gill net less than 2¾ inch stretch measure found set in the waters, or found on the boats or reels of fishermen operating in Green Bay or Lake Michigan may be seized by the state conservation wardens. (The law of the state of Michigan allows no gill nets to be used in outlying waters with meshes less than 2¾ inch stretch measure.)
- Change deer law that bucks must have horns at least 6 inches in length.
- 21. To prohibit the carrying of a gun or rifle in any automobile, or other vehicle unless the same is unloaded, and knocked down or enclosed in a carrying case.

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22. Change the clamming law to permit the use of a dredge with an opening not more than three feet wide or with prongs more than four inches in length. No clams to be retained that measure less than one and one-half inches in greatest dimension.

This is a matter of far greater importance than most people realize. In Wisconsin almost a million dollars is invested in the pearl button industry and thousands of people are employed. It has been known for some time that the clam shell beds were nearing depletion and that some law must be enacted to conserve the supply. In the fall of 1915 the former Commissioners of Fisheries called a conference at Madison. Minnesota, Iowa, Illinois and the U.S. Bureau of Fisheries sent representatives. Pearl button manufacturers from all over the United States and one shell buyer for an European manufacturer were present. The investigations were most exhaustive and a bill was prepared for passage in the 1915 legislature. Senator Robert Glenn, living on the banks of the Mississippi, introduced the bill known as bill No. S. which passed the senate but when it reached the assembly it was so amended as to be of no importance. Minnesota and Illinois passed the identical bill as introduced and which was drawn up by the conference. Here is one result of Wisconsin's failure to pass the measure. Minnesota passed the bill, the waters of the Mississippi river between the two states are now considered as interstate waters under the reciprocal law between the two states. Minnesota sells her clammers a license to use a dredge, Wisconsin does not-Minnesota clammers are taking hundreds of tons of shells and our own people must sit by and see thousands of dollars slip through their fingers. The price of pearl button shells has raised from \$8.00 to \$32.00 per ton, the highest price ever known. The Wisconsin clammers have lost thousands of dollars.

23. That the commission be given the authority, in cases of emergency, to shorten or close any open season, or reduce the bag limit, or prohibit the catching of fish in any certain lake or stream.

FORESTRY AND PARK DIVISIONS.

- 1. A state-wide forestry policy.
- 2. The management of state lands in so far as the constitution will permit, by the state conservation commission.
- 3. That areas suitable for agricultural development be sold to bona fide settlers in small tracts (not over 160 acres).
- That the scattering state lands be sold, since it is impossible to protect them from fire.
- 5. That the policy of leasing islands and lake lots be continued.
- 6. That the state forest nurseries be maintained and forest planting be encouraged throughout the state.
- That the work of forest fire protection be extended over the entire wooded portions of the state through the cooperation of timber owners.
- 8. That the coöperative fire protection agreement with the Federal Government be continued. (Weeks Law)
- 9. That the forest fire laws be amended and strengthened.

10. That Trempealeau Mountain be accepted by the state as a state park and funds be provided for its management.

11. That the development of state roads within all of the parks be continued and adequate funds appropriated for this purpose as well as for the general upkeep and care of the properties.

12. That an appropriation of \$40,000 be made to purchase the remaining interior holdings within the Devil's Lake and Peninsula parks.

We recommend that authority be vested in this commission to sell equipment or other paraphernalia when it is deemed to the advantage of the state, the proceeds of such sale to be credited to the department funds. We oftentimes have articles of equipment that are of no further use to the commission and which should be sold while still having a monetary value. As an instance, in 1915 the state had an old fish car that had been in use for over 20 years. It was necessary to purchase a new steel car as the railroad companies were prohibited from carrying it on passenger trains consisting of steel cars. The original purchase price of the old car was \$5,000 and we had an opportunity to sell it to the Canadian Government for \$3,500. The sale however could not be consumated until the 1915 legislature enacted a special law authorizing us to dispose of that one piece of worn-out equipment.

James Nevin,
Chairman.
W. E. Barber,
Commissioner.
F. B. Moody,
Commissioner.

Attest:

R. S. Scheibel, Secretary.

DIVISION OF FISHERIES.

By JAMES NEVIN.

It was in 1882 that I first became identified with Wisconsin's work in fish culture and for 33 consecutive years I held the position of superintendent of fisheries under the old Commissioners of Fisheries. It is only natural that I should have a feeling of sentiment at the passing of the old commission with which I was connected for so many years. Memories both sad and pleasant come to me as I read the names of the gentlemen with whom I was associated during the past thirty-three years. Many of them have passed to the great beyond. The roll of honor is large and one of which I am proud. These gentlemen served the state as commissioners of fisheries with no thought of recompense, freely and gladly giving their best efforts to the building of a fisheries department of which Wisconsin may well be proud.

Madison
Janesville
Melrose
Milwaukee
Oshkosh
Shullsburg
Mineral Point
Milwaukee
Sturgeon Bay
Madison
Madison
Appleton
Eau Claire
Bayfield
La Crosse
Appleton
Madison
Madison
Oshkosh
Superior
Madison
Milwaukee
La Crosse
Appleton
Wautoma

The change, however, was inevitable, and, in my opinion, the creation of the present Conservation Commission is one that should have occurred years ago. I will be brief in my report covering the Fisheries Division,



and confine my remarks to what may be deemed important, interesting and to what should be printed for the information of those interested in fish culture by the State of Wisconsin. I wish, however, to elaborate somewhat on the subject of the conservation of fish and the necessary restrictions in the taking, catching and killing of fish in our state.

On the following pages will be found full and complete statistics covering the output of our seven permanent hatcheries and three substations. These tables give a complete statement as to the output of each hatchery, varieties of fish hatched and planted, cost of operation, inventories, acreage, and value of lands, buildings and equipment.

HATCHERY IMPROVEMENTS.

Since the issue of the last report by the former Commissioners of Fisheries, the state established what may be called a "sub-station" in Tenney Park, Madison. This hatchery is operated only during the spring hatching period, and is equipped for the propagation of wall-eyed pike and pickerel.

An important improvement was made at the Bayfield Hatchery during the past year. The conduit carrying the water from Birch Run pond to the hatchery has been extended up through the pond so as to take the water from the headwater springs. The extension is of twelve-inch vitrified pipe and increases the length of the pipe line some 900 feet. By taking the water directly at the springs we hope to remedy the following trouble. In the spring when the young trout are in the hatchery troughs, the rains and melting snow cause a heavy wash into Birch Run creek and pond. These heavy spring floods are caused by the lands being cleared for cultivation in recent years. The timber and brush has been cut, the lands have been plowed and each rain causes a heavy surface wash. The soil is a red clay and the spring floods wash the soil into minute particles, carrying it into the pond in such great quantities that the water is turned a distinct red. These clay particles are carried through the conduit into the fry troughs, and the clay adheres to the gills of the little trout causing their death by thousands. We expect to overcome this clay-water by taking the water supply, as I stated above, from the head-water springs.

It is the intention of the commission to build a number of fry ponds at the head of Birch Run and in which we will hold and raise a great quantity of our spring hatch of trout, until they attain the fingerling size, such fish to be for fall planting.

The barn at the Bayfield station was destroyed by fire on the afternoon of September 22, 1916. The fire was caused by lightning. The loss of the building and contents was approximately \$1,500.00, which was covered by state insurance.

The Oshkosh Hatchery was moved from the former location in the North Shore Park to a lot the commission purchased on the river bank. The property has a 150 foot frontage on River street. The reason for the change was because in the old location the hatchery was not giving satisfactory results in the output of fry. This unsatisfactory condition was caused by the water supply which did not afford the proper quality of

water for the hatching of fish eggs. At the new location the water supply is taken by pumping direct from the river.

FISH DYING IN INLAND LAKES.

During the spring of 1916 we received more than the usual number of complaints as to large numbers of dead fish being found in our inland lakes after the ice went out. Several investigations were made, but the conditions were neither serious or alarming. For some reason the winter of 1915-1916 seems to have been a bad season for the wholesale dying of fish all over the state. As a rule it was found that the lakes in which the most dead fish were found, were lakes containing what may be termed an overpopulation of fish. Also the lakes were in some valley and the heavy snows of last winter were blown onto the ice in deep drifts. With this blanket of snow the ice was protected and the extreme cold weather did not crack and heave the ice. This prevented the water from throwing out the gases. The gases accumulated, air or oxygen could not get into the waters and the fish smothered. The dead fish were almost entirely sunfish and crappie; very few pike, pickerel or bass were found. This is not an unusual occurrence. It is not an epidemic or disease, but simply a dying off of the fish for want of air.

NECESSARY LEGISLATION.

The operation of fish hatcheries alone will not maintain our supply of fish for future generations. The work by the hatcheries must be strengthened by reasonable conservation laws, which laws must be rigidly enforced. Nature is very kind to her children—if they live in harmony and walk parallel with her laws. Permit the catching of fish during the spawning season, permit the catching of immature fish, stipulate no limit as to pounds or number of fish in possession, have penalties so low that the dynamiter and gill netter are always willing to "take a chance,"—then fully fifty per cent of the work by the hatcheries is lost before the millions of fish planted in public waters by the state have an opportunity to show results. Conservation does not mean hoarding our fish and game as a miser does his gold; it means to permit the taking, catching and killing of fish and game in such manner, at such times, and in such quantities as will conserve the supply for future years.

So that the reader may more readily understand the enormous drain upon our inland fisheries and appreciate the need of more stringent laws, I wish to state a few facts that will enable the people of our state to better understand the situation. During two weeks in June and the months of July and August, 1916, 865 boxes of game fish, each box weighing 20 pounds, were shipped from Woodruff, Oneida county, Wisconsin. A total of 17,300 pounds of pike, pickerel, black bass and muskellunge. Think of it! From one small northern station, having a population of only 329 souls, and there are hundreds of small summer resort stations just like it in northern Wisconsin from which game fish are shipped in like quantities.

Add to this the pounds of fish consumed in northern Wisconsin in camps, summer homes and summer resorts—for every pound of fish shipped two pounds are consumed locally.

Resort owners agree that the summer of 1916 was the biggest year of history. The hot weather in the cities compelled our people of the middle west to hunt for a place to rest, and the resort owners reaped the benefit. Two special trains were run into the Manitowish, State Line, Minocqua, Woodruff and Eagle River regions every night. Chicago sends an average



RAINBOW TROUT CAUGHT IN LAKE MICHIGAN NEAR RACINE, WISCONSIN. WEIGHT 11 POUNDS, 1 OZ.

of 150 persons into Wisconsin every night during the season. It is quite impossible to grasp the situation. Northern Wisconsin every year is more and more invaded by fishermen. It is stampeded by a horde of men, women and children. Figures run into millions of dollars spent.

We are often asked for estimates as to the pounds of fish caught with hook and line in the inland waters of the state, the value of same and the amount of money spent in the state by summer tourists. These are questions impossible to answer with any degree of exactness. All estimates are, to a greater or less extent, purely guesses. Working on a basis of

averages and securing what reliable information is available from the conservation wardens who examine all shipments of fish on passenger trains passing through the larger cities, looking for possible violations of the state game laws, figures can be given that may be considered as close to the actual amounts as is possible. Wisconsin has some three thousand lakes both large and small within its boundaries, and thousands of miles of rivers and streams. Almost every lake and stream produces several edible varieties of fish.

During the summer of 1916, some 27,000 nonresident fishing licenses were sold in Wisconsin. It is estimated that 800,000 pounds of fish were shipped through the City of Milwaukee last year by nonresidents in the north and central portion of the state to their homes and friends outside of Wisconsin. In addition thereto it is fair to assume that one-half this amount, 400,000 pounds, were shipped out of the state and not passing through Milwaukee, and that 1,000,000 pounds were consumed within the state. Wisconsin has a population of about two and a half million. If one person out of twenty goes fishing occasionally we would have a total of 125,000 persons, including men, women and children, in the entire state who go fishing. Say that each person catches 10 pounds of fish during the whole fishing season, it would represent a catch of 1,250,000 pounds of fish caught by the residents of Wisconsin. All told, residents and nonresidents would have taken a total of 3,450,000 pounds of fish from our waters with hook and line. Fresh fish bring from 15 to 20 cents a pound on the Reduce the price to 10 cents and the total catch would have a value of \$345,000.00.

As to the financial value of the summer tourist business; if each of the 27,000 nonresidents who came into Wisconsin spent \$50.00, they left \$1,350,000.00 in the state. They shipped out or took with them 1,200,000 pounds of fish worth 10 cents per pound, or \$120,000.00. This does not include railroad fares paid. The average estimated amount of \$50.00 spent is the very lowest amount for which any person could enjoy a week's sojourn in our resort regions. There are thousands of people who spend their entire summer in Wisconsin, many stay a month or more, and many for-several weeks. These people leave several hundreds instead of \$50.00 in the state. This estimate, bear in mind, is based only on the 27,000 nonresidents who purchased fishing licenses. Women who do not wish to ship fish, and children less than 16 years of age are not required to purchase fishing licenses. Not 30 per cent of the nonresidents, counting women and children, coming into Wisconsin purchase fishing licenses.

There are many and peculiar conditions to consider in an estimate of the worth of the Wisconsin waters and fishes. It is practically impossible to submit figures that may be considered at all reliable. However, I feel secure in making the statement that if anything, the figures I have given are very low. The value of our lakes and streams and the fish therein is inestimable. Wisconsin was quick to realize the worth of this tremendous natural resource and 42 years ago took the initial step for the perpetuation of fish life, in creating a Commission of Fisheries. The present generation is enjoying the results of the past work of the fisheries department and there is much in store for the enjoyment of future generations. The state spends annually about \$110,000.00 for the protection

and \$50,000.00 for the propagation of fish and game. The total income to Wisconsin from the various sources connected with the hunting and fishing, such as summer resorts, tourists, and additional taxes paid by the railroad companies because of their great increase in business in the resort regions, may be safely placed at some five million dollars a year. What moneys Wisconsin disburses for the protection and propagation of fish and game is returned many times by the thousands of nonresidents who yearly spend their summers and vacations in the state.

There is not a man in our state interested in the commercial fisheries of the Great Lakes and Green Bay who will not agree that the law covering the taking of fish from those waters is a farce; more than that, it is ridiculous. Every man knows that something must be done to conserve the fisheries of the Great Lakes. To secure cooperation and a united agreement as to the proper laws among fishermen is an impossibility. fishermen of every port have their own ideas, and the gist of their idea is that they want no law at all. There is one point on which most of them will agree and that is "Catch fish how, when and where you will,-any size and any quantity." At every session of the Legislature new laws are enacted and old laws repealed. The laws of 1915 contain 15 pages of tables supposed to cover the taking of fish from outlying waters. These 15 pages convey little or no information to the person reading them and it is practically impossible today for any one to say just what the Wisconsin laws are relative to the taking of fish from Lake Michigan and Green Bay. Our laws on commercial fishing must be condensed to the following:

The minimum mesh of gill nets.

An absolute closed season on all varieties of fish.

A law covering restricted areas.

The regulation of the taking of fish by stipulating in the law the minimum size of each variety of fish that may be had in possession.

Cut the law down to these four items, have them just and reasonable, within the bounds of true "conservation" so that the commercial fisherman can obey the laws, then enforce the law. Such a law is simple and every person reading it will understand it. Illinois, Minnesota and Michigan all regulate the size of fish. The entire Dominion of Canada regulates its fishing industry by stating in their laws in plain English the minimum size of each variety of fish that may be had in possession during the opening season. Fish less than such size are confiscated whenever and wherever found, and the person having them in possession is brought into court and fined. It is immaterial whether the person having them in possession is a fisherman, fish dealer, or cold storage man—he is violating the Canadian law by having them in possession or under control. What is the result? The merchants and wholesale fish houses refuse to accept undersized fish, and the fishermen regulate the size of their mesh and their fishing operations so as not to catch immature fish. The law as to size of mesh, depth of water or distance from shore is all nonsense. As I state above, have the law cover the following:

1. No gill net of a mesh less than 23/4 inch stretch measure.

2. No gill nets of any variety to be set or used within one-fourth of a mile of any harbor, pier or breakwater, or any stream emptying into Lake



GERMAN BROWN TROUT CAUGHT IN WAUSHARA COUNTY, WIS-CONSIN. WEIGHT 81 POUNDS.

Michigan, Lake Superior or Green Bay, or within one-fourth mile of the shore line of Door county, or in any of the harbors or bays of Door county.

3. An absolute closed season in Lake Superior during the period from September 15 to November 1, and in Lake Michigan and Green Bay during the period from October 20 to December 1.

4. Stipulate the minimum size of lake trout, whitefish, chub, herring, bluefin, pike, pickerel and other fish that may be caught, had in possession or under control.

The statistics on Lake Michigan and Green Bay show that last year the state licensed the use of 12,533,665 feet or 2,375 miles of gill nets. Do you realize this means that if the licensed gill nets were joined they would reach from New York to Chicago, to St. Paul and then down to the City of New Orleans? Over two million set hooks were used. It is said that a man cannot count a million dollars, one at a time, in a life time. This will give you some understanding as to the dire necessity of placing upon the Statutes of Wisconsin, fishing laws that are truly in the light of conservation, laws that should be simple, each to understand, laws that may be enforced and laws that, when violated, the violater may be brought into court and the state be able to secure a conviction.

DISTRIBUTION OF FISH.

A great majority of the people interested in the planting of fish are of the opinion that because the fish hatchery is located in their midst, nothing further is necessary to furnish fry for distribution. They do not understand that we must either have a large number of breeding fish on hand, or that we must catch a large number of mature fish during the spawning season to obtain eggs for hatching. Brook and rainbow trout and black bass are the only varieties of fish that we raise for propagation purposes, and keep in our ponds, from which to obtain eggs for the hatchery.

At the time we started the 1916 distribution of fry, our files contained approximately 17,000 applications for fish of the various varieties. These applications were received from every part of the state. All told, approximately 206,000,000 fry were planted in the waters of Wisconsin by this Department. Of this number, some 140,000,000 brook and rainbow trout, pickerel, pike and muskellunge were planted in inland waters. The remaining 66,000,000 consisted of lake trout, whitefish, bluefin and chub, which were planted in the outlying waters of the Great Lakes and Green

The following table will show how the eggs of the different species of fish vary in size. We use as a basis the number of eggs per quart.

Brook trout average	13,000 to the quart
Rainbow trout average	10,000 to the quart
Lake trout average	7,000 to the quart
Wall-eyed pike average	150,000 to the quart
Whitefish average	40,000 to the quart
Muskellunge average	50,000 to the quart
Bluefin average	120,000 to the quart

The prevailing color of fish eggs in healthy condition is of an amber hue. If the eggs have not been properly fertilized or if there has been an undue change in temperature, or if the eggs were not properly handled, those that die immediately turn white.

When the eggs are received at the different hatcheries they are all measured and in this manner we know exactly the number of eggs received. All poor eggs removed are measured and by subtracting the loss of eggs from the amount received at the hatchery, it is very easy to determine the approximate number of fry that the hatchery produces and ships out for planting in the waters of the state. Dividing the total production of the hatchery by the number of cans used to make the distribution gives the number of fry per can, and by multiplying the cans by the number of fry in each can, we arrive at the number of fish planted by each person applying for the same.

During the past three months the employees of the commission traveled over 46,000 miles in the distribution of fish and the planting of them in public waters. The fry was transported in specially constructed cans similar in shape to a ten gallon milk can. It required over 16,000 of these ten gallon cans to transport the fry and at certain times it is necessary to curtail the shipments, as the empty cans are not returned as rapidly as is necessary. Oftentimes persons receiving the fry do not return the cans to the depot promptly, and this hampers us greatly in our work of distribution.

ROUGH FISHING OPERATIONS.

During the season of 1915 the Commission entered into 36 contracts under sections 62.38 and 62.50 for the taking of buffalo, carp, dogfish, garfish, ellpout, suckers and sheepshead from inland waters. Six of the contracts were under sec. 62.38 covering the waters of Winnebago county and thirty covering other inland waters. Most of the rough fishing operations were carried on in Lakes Poygan, Winneconne, Butte des Morts and Winnebago in Winnebago county, and in the waters of the Crawfish and Rock rivers, Lakes Monona, Waubesa, Kegonsa and Beaver Dam. Under section 62.38 the fishermen paid the state at the rate of one-half cent per pound on all fish sold and under section 62.50 the state collected one cent per pound. All fishermen paid a per diem of \$2.50 plus necessary expenses including lodging and board for the services of a state supervising warden.

Most of the fish were sold in eastern markets, carp bringing from 3 cts. to 6 cts. per pound, buffalo from 5 cts. to 10 cts. Several carloads of live carp were transported to New York in a car especially constructed for this purpose. These fish were shipped from Hubbleton and Beaver Dam.

To make rough fishing successful under these contracts, requires the investment of considerable capital. It also requires one who understands the business of fishing and operation of nets. Many fishermen lost money because of their inexperience. This work is practically confined to waters in the southern portion of the state; northern waters are not heavily infested with the rough fish. Very few game fish were taken in the nets. Our game fish do not remain in the vicinity of a large school of carp or buffalo. When a particularly large haul of carp was made, 40,000 to 60,000 pounds, not over 75 to 100 pounds of the better varieties of fish would be found in the haul.

The following table will show that the 36 contracts yielded a total catch of 1,381,168 pounds of fish marketed and on the same the revenue of the state amounted to \$11,128.07. Approximately 300,000 pounds of dog-fish, ellpout and garfish were caught, which were buried on the shores.

Where the carp has established himself it is practically impossible to exterminate the fish, but consistent fishing will restrict their numbers to such an extent that the better varieties of fish may hold their own. Wherever the carp establishes himself it is not long before he becomes the dominating factor. The natural increase of the fish is exceedingly rapid and owing to its destructive habits the other varieties rapidly diminish. They simply crowd out the game fish and usurp the grounds. Some objections are made as to carp or rough fishing operations on the ground that seining the lakes does more harm than good. The season for rough fishing is from September 20 to March 20, at a time when the game fish are not



CATCHING WALL-EYED PIKE FOR COLLECTION OF SPAWN

spawning, are in deep water and for this reason there is practically no damage to the game fish. The fact stands that the carp will destroy more spawning grounds and water vegetation than all the seining that could be carried on. Lake Kegonsa in Dane county before carp fishing was carried on was practically a big carp pond. After three years of carp fishing operations, the summer of 1916 was the best game fishing season that the lake afforded for years. The water vegetation is now heavy and there are a number of splendid wild celery beds in the lake. There is absolutely no question as to the excellent results of cleaning the lake of tons of rough fish.

ROUGH FISHING OPERATIONS.

Winnebago county waters (Sec. 62.50)	Lbs. 333,840 158,162
Crawfish river (Sec. 62.38)	77.145

Lake Monona (Sec. 62.38). Lake Waubesa (Sec. 62.38). Lake Kegonsa (Sec. 62.38). Lake Beaver Dam (Sec. 62.38). Other waters (Sec. 62.38).	96,985 210,872 239,307
Total pounds marketed	
Revenue collected by the state Number of contracts entered into	\$11,128.07

SURVEY OF TROUT STREAMS.

For several years I have recommended a thorough survey or examination of trout streams in the state, so as to secure positive information as to whether or not the proper and necessary conditions exist to make the planting of trout successful. Many waters that at one time were excellent trout streams no longer have the proper natural conditions for the development and growth of this species of fish. The timber and brush have been cut from the banks, and the stream now meanders through farm and pasture lands, where, during the summer months, hogs and cattle wallow in the waters. Rains, owing to the timber and brush being cut, cause a heavy wash and flood. There is no question but that many thousands of trout from the state hatcheries are planted in streams in which the fish cannot exist. What may have been a good trout stream a decade ago is to-day nothing but a dirty, roily creek.

This year we started the work of a survey covering Wisconsin trout streams. A complete investigation is made as to the present conditions, i. e., temperature of water, depth, width and length of the stream, food conditions, results of former plantings, or any information that may have a bearing on the subject.

Many persons are of the opinion that water is all a fish needs. We may as well say that air is all a human being needs. A stream may be as pure and cool as spring water and as clear as crystal, if the necessary water vegetation which produces crustacea and caddis is absent, the planting of trout is useless. Crustacea is a form of animal life belonging to the fresh water shrimp family. This food must be abundant in the waters or the young trout cannot survive as it is the only food on which a baby trout lives during the first few months of existence.

The work was started in the southern part of the state and thus far ten counties have been covered. The survey is in charge of Mr. B. O. Webster, foreman of the Delafield State Hatchery, who with one assistant traversed the country in an automobile. By placing additional men on the work we expect to complete the undertaking during 1917.

After the work has been completed and statistics tabulated, the department will be able to arrange the future distribution of trout fry so that the fish will be planted only in streams where we know they will find proper conditions for growth and reproduction. Hundreds of thousands of fry have been planted in streams in which a trout cannot survive. Many trout streams are now polluted with refuse from creameries, cheese and canning factories. This survey also covers the situation where persons

secure trout from the state, and then post the streams "No Fishing Allowed." At the expense of the state and the taxpayer they maintain a good trout fishing stream. In the future such streams will not be supplied unless the public may enjoy the fishing.

During the past season unusual and remarkably large catches of pike and bass have been made with hook and line in the waters of Lake Winnebago and its tributaries. A peculiar condition was the catch of white bass in those waters, being all of practically uniform size and smaller fish, few if any of the large white bass as of former years being caught. Summer resorts reported splendid fishing throughout the north territory. This is also true all over the state.

Since the advent of the automobile trout fishing particularly has suffered. In my opinion the auto is the great cause in the rapid depletion of our fish and game. With an auto, hunters and fishermen can cover as much territory in one day as formerly took a week. The sportsmen can run from one hunting ground or trout stream to another, covering several in a day, even though they be miles from one another. The streams are fished out as fast as the state stocks them. We have a minimum size law, but, nowadays trout fishermen seem, as a rule, to be fishing for numbers instead of the size of fish. Unless a reduction is made in the daily bag limit, I am in fear that we will be unable to keep our streams properly stocked.

In our general recommendations we will cover the change in the law reducing the bag limit on trout and lengthening the closed season on black bass, but I wish to make a few particular remarks regarding these two changes. We intend to reduce the bag limit on trout from 45 to 25. Any true trout fisherman will admit that in this day and age, a catch of 25 trout in one day should satisfy any fisherman.

As to black bass. For many years I have advocated a law permitting no bass to be caught until July first. Of all Wisconsin fishes, the black bass is the only game fish of importance that builds a nest and protects the eggs and young fish. From the time the eggs are deposited on the nest until the young are about 10 days old, the pair of old bass continually remain in the immediate vicinity, driving away any enemy that may seek to destroy the eggs or young. The present law opens the season for the catching of bass at the very time the bass should be protected, i. e., at the time the fish are on the nests. You may take a general average for 10, 20 or even 40 years, and you will find that the bass are on their nests during the month of June. Not one year out of ten will show that black bass have left the spawning grounds by June first, or years when they are still on the grounds in early July. Any real fisherman will tell you that if you will keep out of the shallow bass grounds in June that no bass will be caught. Some fishermen make the hue and cry that if fishing for all varieties of fish except bass is opened on May 29, that they cannot help catching black bass. Let the fishermen keep out of the bays and shallows during June and no bass will be caught. Go out on the lakes on May 29 and see where the men are fishing—every boat is up in some bay among the lily pads or on some gravel bar where the small-mouthed bass spawnand all the men will be casting for bass. The fishermen destroy millions of bass every year. If the reader is one of those who fishes for black



TWELVE YELLOW PERCH. TOTAL WEIGHT 16 POUNDS. TAKEN FROM LAKE KEGONSA, DANE COUNTY, WISCONSIN



WALL-EYED PIKE FROM TOMAHAWK LAKE, ONEIDA COUNTY, WISCONSIN

bass during June he will admit, if he is truthful, that practically every female he caught was full of spawn. Give the black bass a chance to spawn and reproduce, and Wisconsin will always be one of the best black bass fishing states in the Union. The natural reproduction of young bass in the spring of 1916 was much better than the average year. This is due to the fact that the bass spawned late, the early fishermen quit after four or five days fishing on the spawning beds. Later the bass came in and many of the mature fish that would have been caught earlier in the season were left undisturbed, and the result was a good crop of bass fry. This condition means thousands of dollars to future sportsmen.

On the following pages will be found papers by Mr. John H. Lowe, of the University of Wisconsin, and Mr. R. L. Ripple, foreman of the Bayfield State Hatchery, regarding the use of gasoline and benzine in the treatment of trout attacked by a parasitic copepod commonly known as "fish lice" and causing an infection known as "gill trouble." As yet the work is in the early experimental stage, but I feel much encouraged as to the treatment developing into an important factor in the propagation of brook trout. Fish, like the human family, are subject to disease. The most common in the trout family is the above mentioned gill trouble. If unchecked the death rate among the confined fish is enormous. Scientists and fish culturists have spent years of study to find some method of checking the disease in the early stages. The pioneers in trout culture discovered that bathing the fish in a strong salt brine would, to some extent, check the ravages of gill trouble and to the present writing this is still considered the most beneficial remedy.

At the meeting held in Sturgeon Bay, Capt. Albert Kalmbach, who was born on the shores of Lake Michigan and who has been a commercial fisherman for some 45 years, read a paper to the fishermen present. The sentiment and ideas expressed by Capt. Kalmbach are so absolutely true and parallel with the conservation ideas of this commission that I take a great pleasure in printing his paper in this report.

THE EFFECT OF GASOLINE AND BENZINE ON THE PARASITIC COPEPOD, SALMINCOLA EDWARD-SII OLSSON, PARASITIC ON THE GILLS OF THE BROOK TROUT.

By John N. Lowe.

On or about July 8, 1916, Mr. James Nevin, Chairman of the Conservation Commission, requested me to perform experiments with gasoline with a view of determining whether it would destroy the parasitic copepod (Salmincola edwardsii Olsson) which is parasitic on the gills of the brook trout (Salvelinus fontinalis).

Three hatcheries were visited during the investigation, viz. Madison, Wild Rose and Bayfield.

The hatchery at Wild Rose presented the most extensive infection, the adult trout being most affected, but the young fish (fry) were found to be infested with one or more parasites. At Madison the adult fish were not as extensively infected as at Wild Rose but the condition was serious. The young fish (fry and year old) were found to be entirely free from the parasite. The young fish are kept in ponds which are entirely free from all sources of contamination. The Bayfield hatchery presented a different problem and has conditions which are more difficult to overcome. The water coming from Pike's creek is a constant source of infection as it was found that the "wild" trout were infected by the parasite. Nevertheless, it was found upon examination of the fish that the percentage of fish attacked by the parasite was less than at Wild Rose.

The experiments were performed at the Madison and Wild Rose hatcheries. The fish were exposed to gasoline and benzine for varying periods of time. A stop watch was used for recording time. The copepods were examined with a pocket lens magnifying 14 diameters, or with the lower power (3%) of a compound microscope.

The fish placed in gasoline or benzine did not show any discomfort for the first fifteen or thirty seconds. After this period they jumped a great deal and gasped. In about two or three minutes they were suffocated or nearly so. The mucus secreted by the glands covered the entire body. It was creamy white due to the coagulation.

The recovery of the fish was interesting in these experiments. The gaoline penetrated into the tissues of the fish. The gills were covered with an oily film, which inhibited the respiratory functions of the fish and its recovery for a short time. When the fish were returned from gasoline to water, they remained on their sides from five to twenty-five minutes, depending upon the length of time they were kept in the gasoline and

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benzine. There was a spasmodic gasping for a while (3 to 40 or more minutes), when the fish would make an uncoördinated dash forward, the distance covered varying with the individual fish. The usual distance was from two to four feet, when they fell on their sides. After a rest of two or three minutes another start would be made. After this period of rest the fish would right themselves and swim about in a more or less coördinated manner and finally recover.

Benzine was tried because it has a greater evaporating power than gasoline. It was found that fish treated with benzine recovered more rapidly than those treated with gasoline.

The fish treated with gasoline, benzine, or a mixture of the two were apt to die after partial or complete recovery. The muscles in the tail region would begin to stiffen and slowly all the muscles of the body became involved. The heart continued to beat from three to four hours after the muscles of the body had stiffened. The parasites examined on a fish in this condition were found to be in a healthy condition, and continued to live for hours after the fish were dead.

Most of the fish that were exposed to gasoline, benzine, or mixtures of the two, from one to five minutes recovered completely. The fish that died were individuals which were heavily parasitized or had been weakened by the parasites some time previously. There were a very few fish that lived after a six to ten minute exposure.

In regard to the effect of gasoline and benzine on the copepod, it is clear from a study of the experiments listed, that the parasite can withstand the effects of gasoline and benzine for a longer period than any of the brook trout can, even those in the best condition. Very few brook trout can live in gasoline or benzine more than ten minutes, but the parasites live in them from seventeen to twenty-eight minutes. A few of the copepods die when exposed to gasoline or benzine from three to ten minutes, but the number affected is so small that for all practical purposes the results are negative. Careful examination of the parasites killed by gasoline or benzine showed them to be very young individuals or females that had shed their first or second batch of eggs. Probably the ruptured egg sacs permit the gasoline to penetrate into the vitals of the copepod. The vigorous females with their first egg sacs developing are not killed by gasoline or benzine.

The life cycle of the female copepod is about three months. After this period death ensues and the dead parasite and the affected gill undergo deterioration. This reduces the number of functioning gill filaments, and the respiratory functions of the fish. The dead copepod and the affected gill filament serve as a locus for bacterial and fungus infections. Many of the fish examined had no paraistes on their gills, but from the white color of the degenerated gill filaments showed conclusively that they had been heavily infected. It was fish in this condition that died first, even a three minute exposure to gasoline or benzine causing death.

The affected gill filament appears white in color and is very firm to touch. This hardness is probably due to the formation of the scar tissue. The whiteness of the gill filaments is caused by the destruction of the very fine capillaries of the gill filaments. With this impoverished circulation and respiration the vitality of the fish is very much reduced.

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The fish having a large number of white and hard gill filaments were found to be in very poor physical condition. There was no fat on the intestine or body wall. The fish were lean and the muscles were firm. The fish that had not been affected by the parasites showed the intestines surrounded with fat and the body cavity was lined with a thin layer of fat. The muscles had a firmness characteristic of fish in prime condition. This observation has an economic bearing.

It is a known fact that fish in nature put on extra amount of fat before their spawning season. This reserve of fat is used up during the maturation of the ova. Therefore, the number and quality of eggs produced by the



FOUR WALL-EYED PIKE. TOTAL WEIGHT 661/4 POUNDS. TAKEN FROM TOMAHAWK LAKE, ONEIDA COUNTY, WISCONSIN

individual fish is dependent upon its physical condition. The high death rate of infected fish during or after the spawning season is no doubt due to the weakened condition of the fish by the parasite. The constant handling of the fish during this period is also a contributory cause as the weaker fish are not able to withstand the stripping.

The parasites are more numerous upon the old fish. A few parasites are harmful to the fish. Even a single parasite withdraws from the trout just enough blood for its own sustenance. The amount of blood required may be small but it is a loss, and it weakens the fish by just so much, and if the parasite dies this gill filament is functionless. When we consider that there are found from 125 to 200 copepods on the gills of a single fish we are forced to conclude that the drain on the fish's vitality is enormous. With this constant drain there is no energy left for the production of eggs.

THE USE OF GASOLINE IN THE TREATMENT OF FIN TROUBLE AMONG BROOK TROUT.

By R. L. RIPPLE.

During the month of April at the Bayfield Hatchery, there developed a certain fin trouble or disease among several thousand of our brook trout yearlings, a disease with which all fish culturists have come in contact with more or less. The quarters and conditions under which these particular trout were kept and had wintered were ideal, except that the space was somewhat limited and perhaps a little crowded. This fin trouble or disease, if it should be called such, was, in my opinion, caused in some way owing to said close quarters. Many thousands of trout of same age and size, from same eggs and stock fish, were wintered in the same water conditions, but with more ample space and with no bad results, and are a grand lot of trout at this time. When this fin trouble was first noticed, the very tips of the different fins, and tail as well, were slightly frayed, reddish in color and inflamed, the dorsal fin being in all cases more badly affected as the trouble advanced. The trout, although in the above sore condition, never failed to eat and eat well up to the time they fell off and died. As stated above, the disease advanced more rapidly on the dorsal fin and when this fin became affected down to the body of the fish, that trout died. The strongest trout among this affected bunch seemed to throw off the disease and become little the worse for it, except that the dorsal fin would heal over and become only a short stub, the same being true also with other fins and tail. At the first realization of this trouble, I removed and started cleaning up all the affected fish by salt brining and changing quarters, but I soon found that the old method of salting trout was of no avail in this instance, but only hastened their death by keeping the soreness inflamed.

I had removed 500 or 600 of the very worst affected trout to one of the hatchery tanks to prove to myself whether or not the salting operations were really of no avail. Here the water could be drawn down at will and different amounts of water and salt brine strength were tried, but the trout fell off very rapidly. The disease had advanced at that time beyond where any salting or cleaning up by that method, either in weak or strong solution, would do any good. Several other things were tried and still the trout died. Any one who loves his work and that which falls under his personal care, as most hatchery men do, can appreciate the fact that there was nothing left undone in trying to save my little bunch of "speckled beauties." Commissioner Nevin visited the hatchery on Sunday at the

time the disease was at its worst, and mentioned for me to try gasoline and kerosene on the fish, and see what effect that would have upon them.

The next day my good neighbor, Mr. Nourse, called me up saying that he wanted me to come over and help him make up a small crowd for an hour at his farm adjoining the hatchery, as one of University of Wisconsin men was to give a talk on the Diseases and Care of Sheep. I want to say here that I never will be sorry because of the one and one-half hours put in at that talk. The gentleman discribed the different diseases of sheep and finally came to stomach trouble and stomach worms and stated in his remarks that 2 spoonfuls of gasoline to 3 ounces of fresh cows' milk would cure and rid the sheep of worms. In my desperation in trying to do for my bunch of trout, I thought if gasoline had a killing effect on the stomach worms in sheep, why not might its uses be applied to this fin disease of my trout, as I had, of course, supposed that the fin trouble was a germ or parasite of some kind. It did not take me long to collect a half dozen of my worst affected yearling trout and place them in a quart of pure gasoline. In one minute by the watch all were quiet; the struggling of the trout was over: two more minutes elapsed, at which time they were removed to a vat of running water. After watching them several minutes without a quiver anywhere, feeling sorry, giving them up as dead and intending trying another lot for a shorter period of time in the gasoline, I was called out on the pounds. In about 15 minutes upon my return to the hatchery, I discovered my treated trout swiming about gaily. To test their welfare, I gave them some nice fresh liver to humbly atone for the trick I had served them. To my surprise they took food readily. To my further surprise, as I happened to glance into the gasoline measure in which they had been treated, I found that the gasoline was of dirty brownish color and jelly-like, and this proved to me that something had come off those trout.

The treated fish fairly glistened in coloring, they were so clean. The frayed fins turned whitish color at the diseased ends. It was not long before I treated quite a number in like manner, and kept two tanks going, one with the gasoline treated fish, and the other tank containing the salt brined trout. There was a loss in both tanks, but much greater by far in the salted tank. As I was treating my worst cases in both instances, there was bound to be a death loss among the gasoline treated trout from those fish that were beyond any hope anyway.

My experiments told me as far as I carried them that there is something to gasoline in the treatment and cleaning up of trout that should be carried out in a more scientific manner. Three minutes is the limit of time which brook trout will stand the clear gasoline, and revive in running water. The final loss of this bunch of trout was about one-half. Of those treated with gasoline, many were no doubt beyond any help at that time.

Without more positive proof on my part, owing to absence of strong magnifying glasses, and proper amount of time to devote to the work, and the advanced stage of the disease when the gasoline treatment was begun, I cannot state just what results were obtained. At any rate, here is something worth further consideration in the cleaning up of trout, and in the treatment of fin trouble herein referred to, especially if started when the fin trouble is in the first stages.



WHITE BASS TAKEN FROM THE WOLF RIVER, WISCONSIN

I cannot help but think what a great means this gasoline treatment might become if properly applied in the case of the common fish louse or copepod, which attaches itself to the gills of the brook trout, as many of you know. If only to destroy the two protruding egg sacs of this eventually death dealing parasite, that alone would pay well for an occasional gasoline bath among affected brook trout. Thousands of brook trout of any size may be treated in a few gallons of gasoline by holding them in it with scap nets.

PAPER READ AT MEETING HELD WITH COMMER-CIAL FISHERMEN AT STURGEON BAY, WIS-CONSIN, FEBRUARY 16, 1916.

By Albert Kalmbach.

I am glad another opportunity is given us to meet at this time and discuss our common interests. In a spirit of good will to all, I have a message for you. It lies close to my heart and in choosing my thoughts I assure you I have only the future welfare of you fishermen in mind.

You all know I have about lived my alloted time in this career. My life is nearly spent. I have spent it among the fishermen. Personally I cannot live long enough to get much benefit out of conservation of fish, but sincerely, boys, I want you to think, and think hard and fast, I want to give you the benefit of my many years' experience in producing and marketing fish and studious observation of fish culture, and if by my humble efforts I can help make your future conditions better, then I can feel I am doing something in turn for good that has come to me in the business.

We are face to face with conditions that cannot continue as they are. Let us take our lessons from the experience of the past, and correct the future, making it much better for ourselves and our children.

This county is most favorably situated for fishermen, except possibly the marketing or selling of fish.

Our waters offer a considerable variety of edible fish. It has wonderful feeding and spawning grounds for all of them. The waters of Green Bay in particular offer one of the grandest opportunities for fish culture that the sun shines on. I believe and know that to be so.

If we could picture the real truth of our advantage until all the fishermen would have a state of mind that would make of each a volunteer defender of our future business; if they would look on our waters as the source of their future living, and they would honestly and earnestly work to guard that treasure as they would their bank account, they would earn very much more money, do it easier, feel better, take a livelier interest in public matters and become a most honored citizen, one in whom the whole community would take pride.

In arranging these meetings, we feel it is for the future good of our business that we promote a better understanding of each other and through such understanding become interested in the things that go to make our profession in life one of common sympathies.

We are composed of pound net, gill net and hook fishermen. But let us forget we are pound net men, or gill net men or hook men. Let us think

of a larger meaning of the word fisherman, and in this spirit we are men, earning an honorable living by producing food for the people, just as honorable as farming, and let us put honor into the profession. In these waters and this profession we have the means of making men, men we can be proud of as citizens.

In becoming fishermen in the larger meaning of the word, let us cooperate with one another, for getting our selfish ideas such as arise in differing interests as pound net men, and gill net men and hook men. Let us all help each other, aim to get legislation that will get us more fish in years to come.

It does not take much of an observer to see we are playing a losing game. A bare living or existence, with no gain, is the fare of most of the boys. What does that experience teach us? It means there is something very wrong, either in the way we catch fish or stock the waters, or both. You have all seen tons and tons of immature fish caught. If a total of those figures would confront you today you could scarcely believe your senses. Suppose for instance ten or fifteen years ago we had all sat around a goodfellowship club, had a good banquet and all had that Christmas felling such as we have for our families, and the idea went around the room, what can I do for each one of you? If you get each member of your family something for Christmas it costs you something. Now we want to do something for one another that costs an effort and sacrifice, and someone suggests,-We will not catch any more immature fish,-what do you suppose would have been the result today if such a suggestion were Here is a conservative estimate. Take one thousand pounds of No. 2 trout at a market price of three cents or thirty dollars. That is the value the fisherman gets, and the end, the end, mind you, of that thousand pounds. No other results from it to the fisherman.

You leave those fish alone as this Christmas gift to one another and what happens?

Let them grow to be four or six pounders and they become four thousand pounds, and at an average price of 7½ cents and their value is what? \$300.00 or ten times as much as the 1000 pounds of immature. What else do we get by leaving them a few years? These fish on maturing will spawn and reproduce. A conservative estimate, you will agree with me would be several hundred thousand eggs from this 4000 pounds of mature fish. Most of the eggs in its turn becoming, in time, a fish, and by reason of this Christmas spirit we will let the fish grow to maturity, and it in turn leaves thousands of eggs behind it. Just pencil this out and the results will stagger the most vivid imagination among you. And mind you, we started with one thousand pounds of immature fish as a gift to each other. A small guess in eggs would be ten times as many fish reproduced, and put to dollars and cents becomes \$3,000.00. That would have been a wonderful Christmas gift for us boys, now wouldn't it? To make that much for us now, we sacrificed back there a few years ago, \$30.00 of fish for such wonderful results. Multiply such results many, many times for we have caught and marketed hundreds of tons of immature fish.

What would you think of a farmer who took crop after crop off his soil and never put anything back on the farm? He would be committing business suicide. And suppose that farmer couldn't wait for his stock to grow

to maturity and good prices, but would slaughter the little pigs, the calves, the colts and the wee chickens for a few cents because it was quick money and he could not wait. Would you say he was a good candidate for the foolish house?

That is a parallel I am impelled to draw in order that I may impress on your minds the necessity of changing our ways of business suicide. That is the viewpoint I want to place before you. I have not overstated the figures. I have understated them.

If we were big coöperative brothers, helping one another, and some ten to fifteen years ago adopted this Christmas spirit toward one another would we be scratching our heads and wondering how soon the finishing touches will be put to our business?



INTERIOR VIEW STATE HATCHERY AT OSHKOSH HATCHING PIKE EGGS

The great State of Wisconsin has upon its statute books many laws aimed at helping us fishermen. This department of laws has made mistakes due to the fact that the makers of the laws did not know our conditions nor our possibilities. Particularly our possibilities. We had no means of becoming closely associated, most of our fishermen looked upon these laws and their officers as an institution interfering with their rights as individuals.

Selfish ideas for easy money over-balances the great constructive game, that of making a profession based upon fundamental principles of continuous existence and prosperity. Let us try to get legislation based on practical ideas that mean the building up of the industry. Then let us feel these laws are for us. You and me. Our future benefit. And we find ourselves in a spirit of coöperation with these laws. We and our interests are bound up with them, and when we see that, we become men in the large sense, men who feel today's acts are tomorrow's results.

The state is going a long way to meet us and putting out the correct idea, of serving our real needs just like mothering a family. Her representatives are with us today in a true spirit of "getting together," and aiming to make our future better. Suppose every commercial fisherman would accept with his privilege of fishing some responsibility to place back in the water something for what he has taken out, that would cost him some sacrifice and effort, and if he made this sacrifice he would feel some future interest in the waters and set forces to work to protect his future interests.

Our present method of grabbing what we can out of the water, because everybody is doing it, is what has brought us to our present crisis. We are now paying for that thoughtless way.

We read a few years ago that down East were thousands of abandoned farms, run out of business by their former owners, and left for taxes.

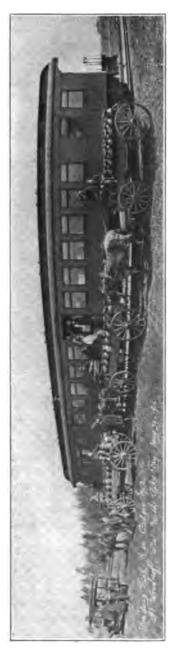
Someone with brains comes along, puts an effort and sacrifice onto the farm, regenerates the place, and it again becomes habitable and productive. So, with our waters, we have them run down to a point where it is a struggle to exist, in fact, our continued existence in this business is going to compel us to do something sooner or later. We have the waters to build up the industry, now, let us become coöperators using good business judgment. I want to call your attention, in closing, to what has been done in places where they have had the same troubles that now confront us.

Lake Erie was run down in fish stock. Boats could not pay expenses. There were no white fish and herring were very scarce. They went to a three-inch mesh net for small size and a four and one-half inch mesh for white fish. Everybody was loyal in support of those sizes. Last spring one boat on Lake Erie caught eleven thousand dollars of white fish in two months. When the fall run of herring came on, eighty-five tugs from seventy to ninety feet long each, fished out of Erie, Penn., and Dunkirk, New York, with daily catches ranging from two to ten tons each, and receiving four cents per pound in the round, for this stock, and on Lake Erie there are about 200 steam tugs. Some of them catch three hundred and fifty tons of fish per annum. On Lake Michigan and Green Bay we have about ninety steam tugs, in Michigan and Wisconsin. We have a very large body of water and a great deal of fine grounds for fish culture, and we could stock these waters to such an extent as to make us all rich.

But, the size of the catches is by no means the whole story. Go into the market at Chicago and see the prices Lake Erie fish bring. Compare their prices to the prices that our stock brings. It would pay all of you to spend some money to see these things for yourself, then you would know the truth on this subject.

We are men, and I believe in you, have known most all of you many years. I want to see you all do better, and so I urge now and here that we get better laws and become, ourselves, a part of those laws, realizing they are for us. Let us make the catching, marketing and shipping of immature fish an impossibility. We will then raise our profession in the eyes of all the world. Each one of us become a conservation force, active and alive, and no one will violate the spirit or rules of the game.

42 Wisconsin Conservation Commission



LOADING STATE DISTRIBUTION CAR AT WOODRUFF, WISCONSIN. DISTRIBUTING PIKE FRY

DIVISION OF WILD LIFE CONSERVATION

By W. E. BARBER.

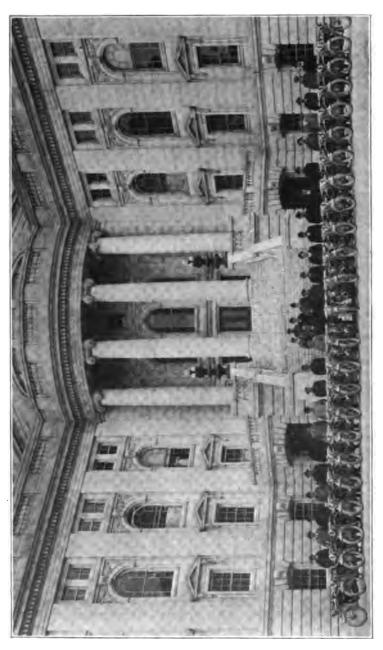
CONSERVATION WARDENS.

The first year of the supervision of this division by the Conservation Commission closed June 30, 1916, and we beg to report that much has been accomplished in the reorganization of the warden department for greater efficiency, in weeding out the dead timber and placing every warden on his merits of efficiency to retain his position with this division.

Wardens have been advised that circumspection in their deportment was demanded in all of their official acts and that their duties were to be confined entirely to the conserving of the wild life of the state, and that their political activities would no longer be the measure of their tenure in office. This departure has resulted in a more coherent organization which is manifest in a more general interest by each and every warden in pushing forward the activities of this division. We shall endeavor to add strength to this division by carrying forward the policy we have established and enthusing the spirit of cooperation among our force, which must result in greater accomplishments in the future.

The consolidation of these various departments has promoted the efficiency of the warden division tremendously. The permanent employes of the various departments are all conservation wardens with police powers to make arrests for any violations of the conservation laws, giving this division added supervision in suppressing violations. Besides, the parks and forests are essential for game covers and naturally belong in the great scheme of conservation.

We have in all at the present time 76 conservation wardens. This number is made up of 63 engaged entirely in the activities of wild life patrol duties. Added to these are ten forest rangers and three park superintendents who are located in vicinities where the services of wardens are essential. Prior to the consolidation of these departments, the wide stretch of wild timberlands of the northern part of the state were without adequate protection, and the adding of the forest rangers to the warden division had given that territory the much needed protection. The park superintendents perform an important service in protecting the song and insectiverous birds during the influx of campers during the summer months. They also patrol a considerable additional territory during the winter months.



EQUIPMENT.

After taking an inventory of the equipment for carrying on the warden service we found that much was lacking in the facilities for wardens in covering their respective territories. Eight of the wardens owned automobiles which they were using under a per diem system. Two owned horses and were receiving pay in like manner. The balance had no way of covering their territory except as they hired livery, travelled by train or on foot. After auditing the expense accounts for a few months, we found that a large part of their expense accounts were for transportation, and they were by no means covering their territories adequately. It was up to us to furnish some means of transportation for our men if we were to expect efficient service. We informed ourselves as to what other states were doing for equipment and found them all in about the same condition as we were. We did find, however, that Massachusetts was using motorcycles in its forestry department for its rangers. They reported to us that they were a great success in both efficiency and economy. After gathering all of the information available, we concluded to purchase either motorcycles or Ford cars, and proceeded to advertise for bids for furnishing 25 motorcycles. We took the matter up with the Ford people and they sent their field man to Madison to confer with us. His best offer was their list price, as he said under the company's rules, they were obliged to protect their agents and could not make an inside price even if we took 25 cars.

Our best bid for 25 motorcycles was \$4,975, offered by the Excelsior Motorcycle Company, of Chicago. Our next best bid was \$5,490, offered by the Harley-Davidson Motorcycle Company, of Milwaukee. One other bid was offered by the Indian Motorcycle Company, of Springfield, Mass., their bid being \$5,668.75. We placed our order with the Excelsior people, as they were the lowest bidders and offered a machine equal to any of the others, as pronounced by motorcycle experts. We put these motorcycles in use on May 20 of this year, and we believe they have paid their cost in saving of expenses. Besides, they have materially facilitated the service. Our contract with the Excelsior people covers the overhauling of every machine this winter, putting on new tires, reënamelling, overhauling the engine, replacing all worn parts with new and making the machines as nearly as possible as good as new. The price for this overhauling is \$30 for each machine.

Wardens who own automobiles we are allowing five cents per mile for the miles actually travelled while in the service of the state. Automobiles are an expensive method of travel as compared with the motorcycle, but there is a large part of Wisconsin where motorcycles are not practical, as they are not a success on sandy roads.

We found the department lacking in sufficient boats to properly patrol the waters that come under our supervision, and have purchased six additional boats and Evinrude motors, and one large boat for lake patrol. We are still lacking in equipment for our wardens if we are to expect efficiency and we will add from time to time until this necessity is supplied. We believe that the State should own sufficient equipment for carrying on

this work in an efficient manner without paying wardens for the use of equipment which they can ill afford to supply.

RUFFED GROUSE, PHEASANT AND PARTRIDGE.

Under the name of ruffed grouse, pheasant and partridge, this bird is well known to all sportsmen as the king of all game birds. It is not only the gamest of all game birds, but is the most palatable when served. This fine bird is in much need of protection or its name will be inscribed with those that have suffered extermination. Not many years ago these birds were plentiful in Wisconsin, inhabiting every grove and woodland through-



MOURNING DOVE

out the state, and no thought was given to their protection until their scattered numbers gave warning to the sportsmen that something must be done.

It was then that the first remedial law was passed, and that simply prescribed a shorter open season for hunting them and a reduced bag limit. The law protecting these birds is so promiscuously localized that a hunter travelling through three counties will find the same number of different laws. In other words, there are too many laws that apply only to separate counties.

It was a mistake that the last legislature did not prescribe a closed season for partridge, for the past two seasons have been disastrous in that the sleet, rain and ice during the winter months covered the forage, destroying many of them. The cold rainy weather during the hatching season lessened the hatch of young birds. In the face of these facts it is no wonder that word comes to us from every part of the state that partridge are very scarce and in some localities that there are none at all. The only thing that will save this specie is a closed season, and it should extend until 1920.

PRAIRIE CHICKEN.

We can only repeat the same story of the prairie chicken that we have recited of the partridge. They are "on their last legs" and must receive attention from this legislature. Scattered flocks of small numbers are seen in some sections of the state, but from many counties the report comes to us that not a single bird is seen. This is a melancholy story as compared to those of a few years ago when they were seen in every county of the state in large flocks, furnishing the most exhilerating sport for both sportsmen and dog, and offering a resistless opportunity to enjoy the great outdoors.

There is a danger line in the resistless law of nature governing these species below which we must not trespass or we invite inevitable extermination. It is conceded by all ornithologists that there is a diverging line below which bird life cannot survive their natural enemies, and a lingering thinning of their numbers by these pests eventually results in their extermination. We are not too sure that our prairie chicken have not approached this line and we submit this information to this legislature to enable it to pass such laws as in its best judgment will conserve this specie. We advise a closed season until 1920.

QUAIL.

Quail are coming back. That sounds good and is full of meaning for these birds were so nearly exterminated in Wisconsin that after 22 years of continuous closed season they are just beginning to recover in appreciable numbers. We believe that at the expiration of the closed season which extends until 1921 we will have them in sufficient numbers to provide short open seasons for taking them. Many of the New England states have lost their quail and despite their efforts to bring them back by the importation of breeding stock, they have accomplished nothing as yet. It is the same story the world over that when you once let your native birds get away, it seems a matter of impossibility to restore them. There has been no degree of success attained by any of the states in the artificial propagation of our native birds. The only safe system is to watch carefully and protect them in their natural habitations.

The last two winters were exceedingly severe, as the heavy sleet and rain storms formed a coating of ice, covering the food supply, and immediately following we were visited with heavy falls of snow accompanied with severe cold weather. It was only through heroic work by this department that tremendous losses of these birds was averted. Feed was supplied by the state and the various protective associations, which was

distributed by our wardens and members of the associations, and the birds survived with very few perishing.

The farmers generally are very choice of the covies that are located on their premises, as they have proven their value to the agriculturist in



BOB WHITE

destroying potato bugs and other destructive insects. Consequently the quail have a generous friend in the farmer and a thrifty spirit of cooperation is redounding greatly to the benefit of the quail.

DUCKS.

We view with optimism the future of all of our waterfowl. The Federal Migratory Bird law has thrown around them that degree of protection that in its scope guarantees their protection throughout the United States. The few years that this law has been in effect has proven the wisdom of its passage in a large increase in the number of birds coming to Wisconsin. Our wardens report that it has been many years since the influx

of birds has been as great as this year, and many are making the lake regions of the northern part of the state their nesting grounds. Since the enactment of the proper kind of state and Federal laws for their protection, there has been noted everywhere a marked increase compared to the decline noted when unregulated hunting was allowed.

In our judgment it should not be the purpose of any restrictive law to make it so unreasonable as to preclude the possibility of the sportsmen bagging a legitimate limit. And in discussing this question we do not want to be understood as favoring a law that will open up the way for wholesale slaughter, but we do believe that the present law restricting the hours to a "sunrise and sunset" schedule is drawing the line a little too close. In our judgment this law could be extended to 20 minutes before sunrise and 20 minutes after sunset without infringing upon the safety in proper protection. Our very best sportsmen who are as strongly in favor of proper protection as any member of this commission and who are giving us most valuable assistance in the enforcement of the game laws, contend that our present law is too restrictive and should be changed as suggested above.

Wood duck are responding to the closed season provided for them six years ago and are coming back in large numbers. Our wardens report large flocks of them in every part of the state where a few years ago they were seldom seen. Mallards, teal, canvasbacks, redhead, pintail and coots are found in large numbers throughout the watered districts of the state.

So we feel safe in saying that our waterfowl are on the increase and they will continue to be a great source of pleasure and profit to all that enjoy the sport of hunting.

GEESE.

Geese have never been considered much of an asset to the sportsmen of Wisconsin. This is easily accounted for, as geese only light in a wide open space of country where their vision is not restricted. Their instinct of avoiding danger is much more keen than that of the other species. They adhere assiduously to nature's warning that self preservation is the first law of nature, and they take no chances. The only places in Wisconsin where any shooting of geese is reported is in Jefferson, Dane, Rock and Walworth counties. They frequently, while on their flight south, light in the open fields of these counties and some of our sportsmen usually wait their coming and occasionally bag a few of them; but these instances are rare.

THE FEDERAL MIGRATORY BIRD LAW.

The Federal Migratory Bird law which directs the Department of Agriculture to adopt suitable regulations and prescribe a fixed open and closed season for migratory birds has done more to conserve the migratory birds than all the laws ever passed by any of the states since the necessity for passing protective game laws was conceived. The game laws which

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were passed at the last session of our legislature were framed to conform to the Federal law and it has added tremendously to the power and efficiency of our laws. It has not entirely done away with violations, but it has reduced all flagrant violations to the minimum. The Department is now considering the adoption of a Federal bag limit and the prohibiting of the sale of migratory waterfowl. This regulation would add another strong arm to the law which would aid tremendously. The Federal game laws have done more to bring protective legislation in the southern states than any other one thing.

Before the passing of that law, half of the southern states made no pretense at game protection, but now the states are few that haven't a very substantial code of laws which in most of the states are fairly well enforced. The prevailing weakness of the laws in those states is that they allow the sale of game, thus opening the way for wholesale slaughter. Their bag limits are excessive and they show no disposition to economize in saving the birds. Until this last year, their bag limit was 50 birds, but so much pressure was brought to bear by other states in urging that their bag limit was unfair to the more progressive states of the north, that they reduced it to 25 birds.

At the National Association of the Game and Fish Commissioners held at New Orleans the week of October 10, 1916, strong pressure was brought to bear urging that the states adopt a uniform bag limit for migratory birds, giving each state an equal maximum opportunity to share in the spoils of this natural resource. But no agreement was reached. However, we believe that such a resolution will be adopted at our next meeting which is to be held in St. Paul next year. Our sportsmen have claimed for years that we have not been getting a square deal or an equal opportunity with the southern states in taking these birds. We have claimed that we were protecting them rigidly during their stay in the north, carefully protecting them through the breeding season, only to have them slaughtered in the wintering zone in the south. This is absolutely true, but we believe that at our next annual meeting at St. Paul, this condition will be remedied and we will get together on a uniform bag limit and restrict all sale of these birds, which will bring about the desired results.

THE FEDERAL LACY LAW.

The Federal Lacy law which prohibits interstate shipment and traffic in game is a powerful weapon for good. This law applies only to states that have laws prohibiting the sale and traffic in game, and Wisconsin is one of that number. We have enforced the Wisconsin laws rigidly and have turned over to the Federal authorities several cases after receiving convictions in our courts. The Federal courts have then imposed additional fines, with heavy costs, which the violators have found a rough and rugged road to travel. It is important to know that one journey through the courts of this process has been sufficient to satisfy the game trafficker. We have never had occasion to make an arrest for a second offense, which convinces us that rigid laws is the true solution of game protection.

INSECTIVEROUS AND SONG BIRDS.

It is only within the past few years that any public attention was given to this class of birds. They came and went at their pleasure, and if they were fortunate enough to pass unmolested it was their good fortune. They were not looked upon as contributing anything of value to the human race other than their cheering songs and graceful presence about our daily



TREE SPARROW

walks. The hunter had no scruples as to shooting them just to see them fall prey to his marksmanship, and the small boy took delight in pursuing them with his toy implements of destruction. We are surprised that more of the species were not exterminated before modern education brought relief to these helpless creatures of the air.

Reason and education has at last rescued them from the perils that pursued them continually and we have found that they are as indispensable to humanity as the sunshine and rain. We have found that without the birds, agriculture would be a lost industry and the green fields and foliage

would disappear and a barren waste would follow in the wake of their destruction. No flowers would bloom or blossoms spring from the earth, but insects would swarm and vermin would cover the earth; and famine and desolation would be visited upon an ignorant and unholy race.

Our scientists have found that the value of these little creatures computed in dollars and cents alone amounts to millions of dollars annually. It is not beyond our reason to comprehend this when they have proven to us that many of the different varieties of insectiverous birds eat three times their weight in insects each day. Multiply this by the countless millions of these little workers that are busy from before sunrise until after sunset every day of the year, and contemplate what it means. It means that when we see one of these little creatures we must realize that he is a mighty creature for good to all humanity and that our lives depend upon his industry—that we must keep him forever with us.

The law protects these birds at all times and they are responding to this protection in increasing numbers. The Audubon societies have done a wonderful work in helping to create public sentiment favorable to bird life. Also in interesting the children in providing bird houses where they will be convenient for their nesting and in providing feeding stations where the birds find abundance of food during the winter months.

We still have a few alien inhabitants who have no regard for any species of wild life and they shoot or destroy the birds regardless of their usefulness. We are pleased to report, however, that the penalty of the law is easily inflicted on this class of violaters, as the courts are intolerant and invariably pronounce the extreme penalty of the law in these cases.

REFUGES AND SANCTUARIES.

The establishing of wild life refuges and sanctuaries has become a tremendous factor in the great scheme of conservation. Every state that has given consideration to the necessity of proper protection and maintaining of its species are establishing refuges where predatory animals and vermin are exterminated and every disturbing influence removed. Lured by the security and solitude offered by this sanctuary, the various species congregate with almost human intelligence and take up their home life.

States that have given the refuge system the longest tests are unanimous in their commendation of the beneficial results accomplished. Some states have set aside large tracts of wild lands, mostly timber lands, around which a single wire is strung to mark the boundary, and have placed posters short distances apart warning hunters and pedestrians that no firearms are allowed within the enclosure. The overflow from these refuges keeps the surrounding country supplied with the various species and guarantees a perpetual flow from these refuge districts for all time.

We have started this work in Wisconsin, having posted two community refuges, besides the six state parks, which are all patrolled by our wardens and careful attention given to the removing of disturbing elements. We are, however, handicapped through a lack of a proper refuge law to give these refuges the legal distinction they should have and the power to this commission necessary for state wide extension of this work. Our com-

mission has framed a refuge law which we are submitting to this legislature for passage, which, if passed, will equip us to carry on this work in the manner it should be. The coming of the automobile has opened the remote districts where seclusion was found, and settlement is encroaching more and more upon their habitations. This condition demands that broader protection must be given for these creatures, which is best afforded by a generous supply of refuges.

DEER.

The immediate danger of exterminating our deer was overcome by the passage of the one buck law by our last legislature. This is a proven method of conservation. Sixteen other states have tried this method prior to the passage of the one buck law in Wisconsin. Something had to be done to save our deer, as settlements are fast encroaching on the wilderness and the fast increasing population is narrowing the area of their habitation. Consequently we must throw around them the necessary protection to retain them as an abundant game animal. In the light of experience, we know that no animal responds more readily to protection and encouragement than the deer, for our first year's trial of the one buck law has resulted in producing more fawns this year than have been seen in the deer territory in any previous year. Nothing is more reasonable if we exercise common sense, than that by retaining our female deer we will perpetuate the specie. The farmer, rearing his domestic cattle or other animals, keeps his females and sells off the males, thus providing against depletion of his herds. The one buck law is a common sense law and it needs no scientist or prophet to figure out the benefits that must surely follow its enforcement. Every sportsman who desires to leave to his posterity the inheritance that God ordained to the children of men will support this law with his very best efforts.

This law, we realize, is an inconvenience to the hunter who cares for nothing only to satisfy his desire to kill. He is angry when he sees the white tails bounding through the brush and he is obliged to restrain his passion to shoot until he can see the antlers. We admit there are hunters who will take the chance and shoot regardless of the consequences, but such men are not sportsmen. They belong to that class of hunters that should be denied a citizen's right to secure a license. We believe that a majority of our hunters are true sportsmen who are out for the sport, and their red blood demands the antlers.

To prove the efficiency of the one buck law to increase the supply of deer, we quote the experience that the state of Vermont has had with this law, it being the first state to adopt the law and consequently having had the longest experience:

"Forty years ago, as a result of persistent hunting the deer were exterminated in the state of Vermont. In 1878 twenty sportsmen raised a fund and purchased from the Adirondack section of New York seventeen deer which were released in Turland and Bennington counties and protected by a closed season which continued for nineteen years. In 1897 an open season was again given, and has been continued each year since that



DEER IN STATE GAME FARM

education, and allow the old hammer and tongs method to supersede enlightened reason.

To the school program of education should be added public lectures given to audiences of adults throughout the various states, which would soon awaken a general interest in conservation that would endure for all time. This commission has already started this latter program and has had several speakers engaged in delivering lectures during the past winter. We shall enlarge upon this work and push this program of education to the best of our ability. It is the one thing that will save the wild life of this nation, and the work must be pushed vigorously. Until such time as the people become educated to the importance of a united public sentiment for conservation, we must pursue the course of warrants, courts and fines and follow the old method of educating with the sledge hammer, teach through fear instead of reason, and the more rigid the laws and the more severe the fines, the more potent the effect.

GAME FARM.

The Wisconsin Game Farm located at Trout Lake, Vilas county, is of considerable importance as a nursery for orphan fawns that are found wandering through the woods with no mother to nurse them and facing starvation. It is surprising how many of these helpless little creatures are rescued by wardens and settlers and sent to this farm where they are fed and cared for. We have in the enclosure at the present time about 100 deer, many of which were orphan fawns that have grown to maturity and form a large herd of breeders that are multiplying rapidly.

In 1913 the former game warden department secured a carload of elk from Yellowstone Park and placed them within the enclosure of the game farm. The long distance shipment and the inclement weather encountered on their journey resulted in the death of all but two, both of which are females, and they are still on the farm. This commission after continued effort, finally secured through the generosity of Charles Comiskey, president of the White Socks Base Ball Club and also president of the Jerome Hunting and Fishing Club, a fine bull elk which he presented to the state free of charge. This gives the state a nucleus for a herd and as they are all acclimated, we feel confident that we will soon have a considerable herd. A vote of thanks is due Mr. Comiskey for his generous gift, which is highly appreciated by this commission.

It is planned by the commission to secure a few moose for breeders and place them on the farm, as it is highly important that Wisconsin should bring back again this animal that at one time was quite plentiful in the far north regions of the state. There is no question but that moose are adapted to that section of the country and they should be encouraged as one of our game animals.

The Wisconsin Game Farm contains about 300 acres of wild timber land and is enclosed with a woven wire fence 10 feet in height. It answers a much needed requirement and will be enlarged from time to time as our animal stock increases. We shall endeavor to secure another carload of elk next year, as we are nicely equipped to handle them and the expense

of securing them is not great. Most of the expense is the transportation charges, as the government will furnish them for the expense involved in capturing them.

OSHKOSH HEADQUARTERS.

Soon after this commission assumed the management of this department, we discovered that the most extensive hunting and fishing grounds of the state were at the confluence of the Fox and Wolf rivers, Lakes Winnebago, Poygan, Big and Little Butte des Morts, in Winnebago and Fond du Lac counties. This territory had never had adequate warden service and the most flagrant violations of the fish and game laws were constantly taking place, and wholesale slaughter of both fish and game had become the chief occupation of a number of market hunters. They had built up a profitable business at the expense of the law-abiding citizens.

It was important that this practice be stopped, and in proceeding we established a headquarters for a corps of wardens at Oshkosh by providing an office in the state fish hatchery, equipped with telephone, and other accessories necessary for commodious sleeping apartments, a sufficient fleet of boats, motorcycle and automobile for patrolling the territory, a spacious boat house for securely caring for the boats. It has resulted in a general cleaning out of the offenders and has established a wholesome observance of the law that is redounding to the conservation of both fish and game.

Arrests have been many and the heavy fines inflicted by the courts at Oshkosh have become an obstacle of terror to the violaters. One visit to his Majesty's court has sufficed their appetite for illegal game, and they have concluded that it pays to observe the law.



FEEDING THE FAWNS. STATE GAME FARM. TROUT LAKE

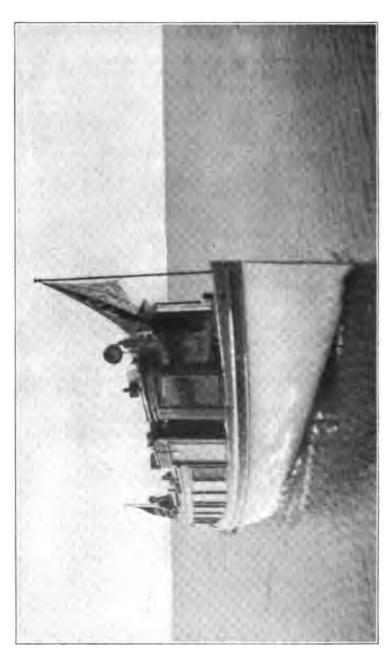
COÖPERATION.

The Conservation Commission should have a more general coöperation of the people in the work we are doing. It is a physical impossibility for us to suppress violations without the assistance of law-abiding citizens, but a feeling exists among the people that it is unbecoming to report to an officer of this commission violations, and instead, they proceed to criticise this department because we are not on the spot the moment a poacher in some remote district commits a violation. Many people view a conservation warden as an undesirable citizen having received his appointment as a compensation for political services rendered. entirely an erroneous idea, as the warden service is under Civil Service laws and all wardens are instructed to devote their entire time to their official duties. We believe this department merits the most generous cooperation of the people, as we are engaged in a work most important to every individual within the state. We should have your moral as well as your active support in the enforcement of the laws. We know that many people do not understand the relations this commission bears to the well-being of the people. We are officers appointed to conserve the only natural resource that it is possible to destroy and exterminate. Then tell us why, if you believe these natural resources should be conserved, that every citizen should not volunteer his hearty cooperation.

No other natural resource can be destroyed. The land, the lakes, the rivers and forests are indestructible. All of these will remain with the people to the end of the earth. But the wild life which constitutes one of our greatest blessings can be exterminated and when once gone it is gone forever. We have an example of the utter disregard of the people for these species in the passing of the passenger pigeon. That bird is gone forever. Not one living bird of that specie remains on earth, and just a few years ago they were here in countless millions. This is the one black spot on our civilization that cannot be removed, and we should guard well lest we repeat the error by adding more to the list with the passenger pigeon.

STATISTICS.

The State of Wisconsin is without any statistics as to the amount of game and fur bearing animals that are taken in the state each year. This is a condition that should not exist. This state should know approximately the number of each variety of animals and game birds taken. We have worked out a plan whereby we believe we can secure this valuable information, and which we think will interest every citizen that is interested in knowing the value of this resource to the people. Our department received a letter from Washington, D. C., asking us how many ducks were killed in Wisconsin during the open season of 1915 and we were unable to give them any sort of information on this subject. There has never been any system of taking this census which we believe to be a most important factor if we are to intelligently provide laws that will meet the demands necessary for systematical conservation.



We propose to attach to each hunting license sold a coupon with columns designating at the top the name of each variety of game or fur bearing animal. At the expiration of the license, the purchaser will return to his local county clerk the coupon with the number of each variety taken during the year placed in the column provided for that variety, before another license will be issued to the applicant. These coupons, in turn, to be forwarded to the Conservation Commission by the county clerks.

With this system in force, at the close of the hunting season we will be in possession of information of a most interesting nature which we have no doubt will astonish the most careful students of our game. We believe it will show that our fur bearing animals are producing many thousands of dollars worth of fur and that our game valued alone in dollars and cents will astonish every citizen that reads the report. We believe that the sportsmen will cooperate with us most heartily in securing this information, as it has always been a question that they have wanted solved. We have consulted with several of them as to the practicability of our scheme and they have all acquiesced in the wisdom of securing this information. They also state that it will be no trouble to the hunter to fill out the coupon at the close of the season, for hunters as a rule keep track of their kill just for their own information.

We believe this information will be of great value to our Department of Agriculture in the compiling of the statistics of the state, also our State University will be in possession of information that they have long sought to obtain. It is interesting to know that Wisconsin will be the first state in the Union to obtain this information if our next legislature passes the law legalizing the coupon.

The time is past when we can afford to permit this department to be run in a haphazard manner. It needs the very best supervision that is possible in every branch of its activities, and the more information we can obtain the more intelligently we will be able to administer to its needs.

The following poem written by Dr. Hornaday, director of the Bronx Zoölogical Gardens of New York City, so vividly illustrates the picture of future generations of boys, whose red blood calls them to the GREAT OUTDOOR SPORT, that we print it with our report, as a warning of the responsibility we owe to future generations:

ROBBED

Oh, where is the game, Daddy, where is the game, That you hunted when you were a boy? You've told me a lot of the game that you shot, No wonder such sport gave you joy. I'm old enough now to handle a gun, Let me be a sportsman, too.

I'd like my fair run of clean outdoor fun, And I want to shoot just like you.

But where are the birds, Daddy, where are the birds? I can't put them up anywhere.
You had your good sport with the wild flocks and herds, And surely you saved me my share.

68 Wisconsin Conservation Commission

And where is the big game that roamed around here, When grandfather came here with you? I don't see one antelope, bison or deer, Didn't grandfather save me a few?

Why don't you speak up, Dad, and show me some game?
Now, why do you look far away?
Your face is all red with what looks like shame,
Is there nothing at all you can say?
What! The game is all gone! There is no hunting, now!
No game birds to shoot, nor to see!
Then take back your gun: I'll go back to the plow,
But oh, Daddy, how could you rob me!

DIVISION OF FORESTRY AND PARKS.

By F. B. Moody.

All of the powers granted by former legislatures to the State Board of Forestry and the State Park Board, with respect to the management of the so-called forest reserves and state parks, were delegated to the Conservation Commission. The work of the two divisions since August 1, 1915, has been under the direct supervision of the forester member of the commission.

The report of the former State Forester for the two preceding years prior to the consolidation of the Departments was not issued, and it has not been deemed necessary to report on the work of the Forestry Board for that period, except in a general way.

The status of forestry in Wisconsin is a peculiar one, and in order to present the matter clearly, the following statement is made, setting forth the reasons why the whole question was brought before the Supreme Court for adjustment.

THE FORESTRY CASE.

The policy of the Forestry Board in acquiring large tracts of land under a land contract caused the questions to be raised during the 1913 session of the legislature as to whether the purchase of forest reserve lands is not "works of internal improvement" which is prohibited by the State Constitution. Since, upon careful study of the question by the Attorney-General's department, they were unable to find that this question had ever been decided by the courts in any state, they advised that the question be brought before the Supreme Court of Wisconsin. The Court agreed to take original jurisdiction of the case, and it was brought before the Court upon "the petition of the Attorney-General seeking to obtain a writ of mandamus against the defendant, the Secretary of State, to compel the auditing of certain vouchers issued by the State Forester and the issuance of warrants thereon against the State Treasurer for the payment of part of the purchase price of certain lands attempted to be purchased from the G. F. Sanborn company to be added to the State Forest Reserve."

The suit was a friendly one, and the Secretary of State agreed to refuse payment of the vouchers so the case could be brought promptly before the Supreme Court.

Upon the submission of briefs by both sides, other points were brought out, among them: (1) Whether the Forestry Board has correctly construed the Statute in presuming to have authority to bind the State by



ENTRANCE TO THE PENINSULA STATE PARK. FISH CREEK



FORESTRY HEADQUARTERS. TROUT LAKE

long time, interest bearing obligations; (2) whether the basis, itself, of the forestry scheme, the legislative diversion of the land and proceeds thereof granted to the State for particular purposes to a different one, is legitimate; (3) whether using revenues raised by present taxation to promote the production or improvement of forests for the benefit of future generations, is a public purpose within the meaning of the Constitution; (4) whether interest bearing obligations of the State in excess of \$100,000 is valid in any event; (5) whether the creation of interest bearing indebtedness of a less amount is valid in view of existing indebtedness of the State to the trust funds or otherwise; and perhaps still others, might, upon due consideration, aided by eminent counsel, be deemed worthy of judicial interference.and of being brought to the attention of the courts in this litigation in an appropriate way. The case is of great importance.

"It is therefore considered that the court should and will decline to decide upon the duty of the Secretary of State in respect to making the payments in question on the motion of quash, but will permit such motion to be withdrawn and a return to be made to the alternative writ within thirty days, setting forth by answer every difficulty which he may be advised should be thus set forth in order that all questions in relation to his duty may be so solved as to protect the state and its officers in respect to the use of moneys for forestry purposes which are in the custody of the State Treasurer.

"In case of issue being joined as herein suggested, the Court will aid in reaching a final conclusion speedily by placing the case on the present calendar and advancing it for argument."

The decree of the court was rendered February 12, 1915, and is as follows:

"By the Court: It is considered, ordered, decreed and adjudged that: "First, The demurrer to defendant's pleading be and is overruled.

"Second. The land contract mentioned in the petition is void for reasons indicated in the opinion, particularly because:
"a. It created a state debt and created such when state indebtedness

exceeded the constitutional limit. 'b. It is an evidence of indebtedness within the state constitutional prohibition.

"c. The contract was not authorized by statute.
"d. By section 10, Art. VIII, at the date of the contract, it is fatally within the 'Works of internal improvement' feature of the forestry statutes (though they are in important features, as indicated in the opinion, not so tainted) and the addition, in form, to such section in November, 1910, failed for reasons stated in the opinion.

"e. It is an inseparable part of the forestry legislation and particularly

of the invalid features thereof stated in the opinion.

"Third. The forestry legislation, including section 1072-1, Chapter 367, Laws of 1897, Chapter 450, Laws of 1903, and Chapter 264, Laws of 1905, and such other acts as there may be, did not repeal or affect sections 250 and 251, Stats. 1898, for reasons cited in the opinion. Such sections are part of the written law of the state and govern the matters therein

"Fourth. All land derived by the state from the United States under the swamp land grants, the lands in lieu of swamp lands, set aside for educational purposes under Chapter 537, Laws of 1865, and confirmed by Chapter 151, Laws of 1869, and subsequent practice, and all other lands so derived or in lieu of swamp lands and required to be set apart under the terms of said sections 250 and 251, by section 2, Art. X of the constitution and the legislative action referred to became, and so far as not disposed of are, school fund lands, as regards the manner of handling the same, subject to the constitutional duty to conserve the same for the purpose of producing money for the school fund, as indicated in the opinion; but under the control of the legislature in respect to the manner of dealing

therewith for such purpose.

"Fifth. The sections of the statutes composing Chap. 740, Laws of 1913, and those composing Chapter 491, Laws of 1907, are unconstitutional for the reasons stated in the opinion.

The provisions of the forestry legislation, other than the features mentioned, are valid within limitations, stated in the opinion.

The state has an equitable lien on the lands included in the illegal contract for the money paid thereon, and such money, equitable, is declared to have been trust money, whereby such lien inures to the

benefit of the trust fund property.

For the benefit of the trust funds, the balance due on the contract shall be paid out of trust fund money when practicable, and to provide therefor, all moneys to the credit of the forestry fund derived from sales of land, or from appropriations to buy lands, or in the tax title fund referable to sections 1494-131 to 135 inclusive, Stats. 1913, are declared to equitably belong to the drainage and constitutional trust funds. Because of the diversion of such funds to forestry purposes and to the general fund, and the resulting confusion, the whole is declared to have the character of the more important funds which have wrongfully lost their identity, and such equitable status shall subsist so far as necessary to fully remedy the diversion and confusion.

"Ninth. The newly acquired lands under the forestry law, except those donated to the state for forestry purposes, have the cast of the constitu-tional trust fund lands and will be administered accordingly until, upon a full accounting it shall be found what part, if any, will remain after fully

restoring the integrity of the trust fund lands and trust funds.

The facts being admitted, the alternative writ of mandamus is dismissed, but the cause retained for the purpose of final disposition upon the coming in of the report of the referees hereinafter appointed.

"Eleventh. There shall be an accounting which is hereby ordered of all dealings with the trust fund lands of the date of Ch. 367, Laws of 1897, and so long prior thereto as practicable, not earlier than the decision under Chapter 537, Laws of 1865,—and of lands acquired under the forestry purposes or acquired by proceeds of the latter, and an accounting of all proceeds of such trust lands and income thereof and income which such proceeds would have earned had the same been devoted to the trust to which they belonged, such accounting to include all moneys paid into the forestry fund or general fund, derived from trust fund land or lands purchased therewith and income from such proceeds, and a partition shall be made of the entire property so found equitable and legally to belong to the constitutional trusts, including any indebtedness from the general fund; giving due credit for all proper disbursements chargeable to such trust funds,—so that each of the constitutional trusts will have their equitable and legal portion of the trust fund property with identity established as to lands and other assets, as near as may be, after the manner of the decision under Chapter 537, Laws of 1865. Such accounting shall include all matters not specifically mentioned so far as necessary to cover the field discussed in the opinion and carry out the intent thereof guided by such opinion; and the referee shall report the result of the accounting to the court with all convenient speed.

"For the purposes of the accounting the cause is referred to the commissioners of public land and Judge Samuel D. Hastings as special referee.

"The holders of land contracts like the particular one shall be bound by the decision herein subject to the right of any vendor or assignee of such vendor to show cause why to the contrary within twenty days after service of a copy of this order on such vendor or assignee and notice to show such cause within such time or be so bound, and such notice in writing shall be given, so far as practicable, within twenty days after the entry

hereof and proof be filed as part of the proceeds of this case.

"Administrative orders will be accorded, if necessary, for further guidance in the course of the accounting, to the end that this determination may be fully carried out according to the intent thereof.

"Upon the coming in and confirmation of the report of the referees,

judgment shall be rendered in respect to the matters covered thereby in

accordance with such confirmation.

In a concurring opinion, Chief Justice Winslow does not share the doubt in regard to the right of the State to raise taxes in acquiring and handling land as a forest reserve. It is as follows:

"My difficulty with the opinion" (of the court) "stated in a general way, is this: It so limits and circumscribes the powers of the state with regard to the afforestation and reforestation that it leaves little more than a shell behind. At least this is the way the opinion impresses me and the way I think it will be generally understood.

"There are three general propositions which I think should be stated

in this case clearly and fully, without hedging them about with limitations, qualifications, and provisos which render them practically useless, and

those propositions are as follows:

"First, the acquisition, preservation, and scientific care of forests and forest areas by the State, as well as the sale of timber therefrom for gain in accordance with the well understood canons of forest culture, is preeminently a public purpose. It would be a mere affectation of learning to dwell upon the value to a state of great forest areas. That has been established long since and is not open to question. The lamentable results which have followed the cutting of forests over large areas, the serious effects of such cutting upon climate, rainfall, preservation of the soil from erosion, regularity of river flow, and other highly important things which go to make the welfare of the state, are matters of history. They

need not be descanted upon.

"Second, before a public purpose of the first rank in importance, there can be no question of the power of the state to levy taxes for the accomplishment of the purpose. The power of taxation exists for every public purpose unless some constitutional prohibition, either federal or state, has taken it away. I find no such prohibition. I confess my inability to understand the reasoning which finds it in that clause of the Constitution which commands the legislature to levy an annual tax to defray the estimated expenses of the state. The power of taxation is one of the necessary attributes of sovereignty. To say that, because the Constitution makers thought best to make a specific provision that taxes should be levied for certain purposes, they intended thereby to interdict taxation for all other purposes, is to my mind unthinkable. Besides, if afforestation and reforestation be public purposes, then the moneys spent in carrying them on are necessarily and properly expenses of the state and come within the constitutional command. The expenses of a state include the moneys which it spends in carrying out the public purposes which the legislative judgment directs to be carried out.

"Third, afforestation and reforestation of large areas are not 'works of internal improvement' within the meaning of the Constitution. In stating the proposition, I accept the definition given in the case of the State vs. Froehlich, 115 Wis. 32; 91 N. W. 115; 58 L. R. A. 757; 95 Am. St. Rep. 894. It was there said that the term includes 'those things which ordinarily might, in human experience, be expected to be undertaken for profit or benefit to the property interests of private promoters, as distinguished from those other things which primarily, and preponderantly merely facilitate the essential functions of government'. In the same opinion it was said, in substance, that this classification does not exclude the possibility that some of the dominant characteristics of one class

may be present, but, of course, not dominantly in illustrations of the other

class.

"Now I affirm that it is not to be expected in the light of human experience in this land at least, that the establishment and conservation of great forest areas for the public good should be undertaken by private enterprise, and I also affirm my belief, as previously stated, that such work is preëminently a public work, and hence one of the essential functions of government. It has not been recognized as such until recently perhaps, but that is merely because the conditions which make it such have only recently arisen and become acute. So in my judgment every act which is necessary to be done in successfully carrying on afforestation and reforestation, including the purchasing of the necessary lands, may properly be done by the state. My original opinion was that this might properly be done by the state. My original opinion was that this might properly include the erection of sawmills and the manufacture of lumber out of the timber which under the rules of scientific forestry ought to be cut, but I yielded my opinion on this point, and I stand by the concession. I do think, however, that it covers every necessary and proper act up to and including the sale to third persons of standing timber which ought to be cut.

"I have not desired to argue out these propositions, but only to state them." (Northwestern Reporter, Vol. 151, No. 3, pp. 377–378, State vs.

Donald.)

Following out the decree of the Court, a special referee (Samuel D. Hastings) was appointed to render the accounting ordered by the court (see 11th item of the decree). Mr. Hastings, with reference to the newly acquired lands, says in part:

"The judgment is that they have the cast of the constitutional trust fund lands and will be administered accordingly, until upon a full accounting, it shall be found what part, if any, will remain after fully restoring the integrity of the trust fund lands and trust funds.' The accounting shows a large indebtedness to each of the four constitutional trust funds. The integrity of said funds will not be fully restored until all of said in-debtedness is paid. The reason for such lands having such cast is stated in the opinion as follows: 'On account of the unwarranted confusion of the different classes of trust fund lands with lands purchased by proceeds of trust fund lands and other moneys, including money drawn from the general fund, and income from trust funds and other confusions, all must be regarded as having the cast of trust fund lands and money, so far as necessary to the full restoration of such trust fund lands and property, and identification of the amount belonging to each fund as to the date of chapter 367, Laws of 1897, and further back if found practicable." * * * "I have construed the opinion and judgment of the court to be that upon

the facts and conclusions pointed out in this report all the newly acquired lands have the cast of Normal School lands, and are to be administered as such until the entire debt of the General Fund as found in this report

is fully paid.

"Following the interpretation of the Court's opinion and judgment, and of the constitution and statutes, as above explained, I find and report:

1st. As to the Normal School Fund:

(a) All of the lands conveyed to the State of Wisconsin pursuant to the provisions of the Act of Congress approved September 28, 1850, and the Act of Congress approved March 2, 1855, and known as swamp and indemnity lands, respectively, to which the state still holds title, belong to the Normal School Fund.

"(m) The General Fund is indebted to the Normal School Fund in the sum of One Million Five Hundred and Seventeen Thousand Five Hundred and Fourteen Dollars and Twenty-three Cents. (\$1,517,514.23),

which arose as follows:

1. The value of Normal School lands given away without	
consideration	\$96,063.14
2. Moneys belonging to the principal of this fund placed in income fund and spent	70.939.02
Moneys taken from the principal of the trust fund and used as part of the General Fund for general	·
state purposes	515,700.00
4. Proceeds from sales of Normal School lands, paid into	
and used as part of the General Fund	
5. Proceeds from sale of Normal School lands paid into	
the Forest Reserve Fund and used for forestry pur-	414,162.20
•	\$1,515,539.05
6. One-half amount received from Fuller and others for	. _,,
interest in swamp lands patented to state	
	\$1.517.514.23

"(n) The Normal School Fund has a lien upon all the lands acquired by the state under the 'forestry laws,' either by purchase or by tax deeds, for the full amount of said indebtedness of the General Fund to said Normal School Fund. All of said lands have the case of Normal School Fund lands, and are to be administered as such until upon a full accounting it shall appear that said indebtedness has been fully paid from the proceeds of said lands or other sources. Said lands are described in Schedules I and K. The quantity shown is 157,091.44 acres."

Under the decision the Conservation Commission having as a primary object the production of school fund money, has the right to manage all of the state lands with the exception of the school lands proper, which are small in amount, totalling some 12,100 acres. Therefore, it is possible for the State to hold the forest lands now possessed and to acquire other lands, provided such purchases are made to enhance the value of the trust. With the same object in view, it is possible to reforest portions of the so-called forest reserve.

The Supreme Court decision did not, in any way, affect the management of the State Park properties, or lands granted to the State for forestry purposes.

GRANTS OF LAND FOR FORESTRY PURPOSES.

Under the Federal grant of 1906, approximately 20,000 acres of vacant government land were transferred to the State for forestry purposes. The act provides that any or all of the land may be sold with the consent of the Secretary of the Interior, provided the proceeds be used only in the reforestation of the permanent reserves.

Of this grant 5,963.47 acres have been sold for a price of \$21,966.92, which constitutes a reforestation fund, in which there is now a balance of \$9,284.00, and more than two-thirds of the lands are still held, which are probably worth from \$45,000.00 to \$50,000.00.

In 1912 another grant was made conveying all of the unsurveyed and unattached islands to the State north of Town 33, to be used as additions to the forest reserve only. Some 637 islands totalling about 875 acres have been surveyed and listed to date.

Since these islands cannot be sold, under the terms of the grant, the policy of leasing them for summer resort and camp site purposes was adopted. The annual revenue from island leases to date is \$862.00 for 38 islands. It is expected, however, that they will eventually bring in an income of approximately \$10,000.00 per year, as may be seen from the following table:

ISLANDS GRANTED TO WISCONSIN BY THE UNITED STATES.

County	Number	Acreage	1 .		
Ashland Barron Bayfield Burnett Douglas Florence Forest	5 35 40 47 7 18	8 .28 16 .64 56 .42 58 .64 23 .43 17 .02 27 .88	MarinetteOneidaPolkPriceSawyerVilasWashburn	5 99 43 15 48 111	1 .47 154 .84 55 .33 11 .80 104 .96 107 .92 162 .99
Iron. Langlade	44 3	30 .17 1 .80 5 .55		637	875 .14

NEBAGAMON LUMBER COMPANY GRANT

In 1907 the Nebagamon Lumber Company granted to the State 4,321.07 acres of land in Douglas county under the following conditions: "The said lands to be used for forestry purposes only and should the same be no longer used for said purpose, the title of the same is to revert back to the party of the first part." These lands are worth approximately \$20.000.00.

A portion of this grant lies along the Brule river, which rises near the upper St. Croix Lake, flows north through the eastern part of Douglas county and empties into Lake Superior. Such portions of the land as border the stream have been surveyed into lots to be leased for camp and cottage sites, and will be managed as a State Park rather than as a Forest Beserve.

PURCHASED LAND.

There was purchased by the Forestry Board approximately 159,000 acres in Douglas, Iron, Oneida, Vilas and Forest counties. This land was acquired at an average price of \$3.45, including three purchases of heavy standing timber as follows:

Acreage purchased from \$2.00 or less to \$2.56. Acreage purchased from \$2.68 or less to \$3.50. Acreage purchased from \$3.75 or less to \$4.60. Acreage purchased from \$5.00 or less to \$6.50. Over \$6.50.	56,972.54 38,451.95
Total Acreage	159,003.55 \$548.562.24

THE FOLLOWING TABLE GIVES THE ACREAGE BY COUNTIES OF LANDS GRANTED TO THE STATE UNDER SWAMP AND SCHOOL GRANTS, GOVERNMENT REFORESTATION GRANT, NEBAGAMON LUMBER COMPANY GRANT, ISLAND GRANT AND LANDS PURCHASED FOR FORESTRY PURPOSES.

	8wa	mp, School, E Acres Vacant.	kc.	Govt. Reforestation Grants.		Grants. Acres P		Acres Pur- chased as
	Swamp	School	Agric. Coll. & Univer- sity.	Acres Vacant	Total Granted	additions to forest re- serves.		
Adams	120.72 3,685.76	160.00 160. a		360.00	440.00			
SAFTOD		40.00						
Bayfield	909.02 551.42	80.00	U. 36.90	270.58	758.42			
Burnett	2,294.86	1,120.00		1,354.30	4,069.28			
Chippewa	204.24 1.025.80		U. 40.00					
Crawford Dodge	1,115.02	. 27	0. 40.00					
Door	37.00	40.00						
Douglas	716.02	280.00		1,241.23	1,900.73	605.68		
Dunn Esu Claire	204.50 211.02	280.00 200.00	U. 83.73			1		
Florence	3,598.44	200.00	U. 83.13	80.00	80.00	İ		
Forest	33,572.12	1,565.50		240.00	240.00	1,919.29		
irant Iron	40.60 21,772.71	1.329.80	,	506.74	707.14	7,016.21		
Jackson	1,526.99	360.00				1		
Juneau	50.00	151.50	1					
La Crosse	200.27 1,258.00	80.00	ļ	40.00	40.00			
Lincoln	961.32	AU. U3	l	40.00	95.60	1		
Marathon	160.00 4.860.74	139.87	1	447.10	447.10			
	.,	1		447.10	447.10			
Marquette Monroe	134.68 120.00	60.00 440.00	1					
Oconto	1,000.30	40.00				ļ		
Oneida Pepin	42,507.64 111.41	1,660.80		3,167.67	3,167.67	34,812.2		
-			1					
Pierce Polk	62.77 225.85	1.10 840.00		646.00	686.40	1		
Polk Price	17,872.04	360.00		1.075.69	1.750.69			
Richland	15.54			.,				
Rusk	2,394.96		İ					
Sawyer	8,677.23	560.00	i	1,711.00	2,336.90			
Shawano Taylor	279.55 1,882.54	40.00	A. C. 40.00			1		
Trempealeau	110.90		1	1	-	1		
Vernon	523.39	ļ	1					
Vilas	12,223.39	1,242.60		2,444.57	2,444.57	114,889.79		
Washburn Waukesha	2,051.28	840.00 Vil. Lot		433.15	817.40	1		
Waupaca.	40.00					1		
Winnebago Islands in Lakes, vari-	447.06	80.00						
ous counties		32.02						
İ	100 047 72	10 107 00	200 00	14 007 42	10 000 00	150 020 11		
	169,647.76	12,107.26	200.63	14,027.43	19,990 90	159.273.1		

Lands in Douglas county granted by the Nebagamon Lbr. Co., 4321.07 A. Ialands conveyed by U. S. for forestry purposes in various counties 875.00 A. a. 80 acres excheated lands.



FIRE LOOKOUT STATION. FOREST RESERVE

Note: By triangulation methods a fire may be quickly and accurately determined and located.

FOREST PROTECTION. |

The protection of forests from fire is the first essential in the development of a forest policy for a State. Past experience has proven that the forests of Wisconsin have suffered great damage from fire at times, and, without question, history will repeat itself in the future, unless a well planned fire organization is developed, to be ready for the real dry season.

The protection of forests from fire in the north one-half of the State is brought about through an organization of town fire wardens, assistant fire wardens and the protective force of rangers and patrolmen in what is known as the forest reserve region. The town fire warden system is established by having each town chairman become ex officio fire warden and the road superintendents, assistant fire wardens. The chief duties of the fire wardens, of whom there are about 555 in the territory, in which there is a fire hazard, are the fighting of fires, instead of prevention and detection. The system of fire protection as applied to the greater part of the State lands or the so-called forest reserve area is one of prevention, detection and control.

The present forest fire organization outside of the protected area is inadequate since there is no definite plan of detection and prevention. The local wardens usually will wait until fires are upon them before taking any protective measures. From a conservation standpoint, forest fire prevention is the most important feature. Therefore, adequate appropriation should be made through State taxation to make it possible to provide for the appointment of so-called district fire wardens, whose duties would be to cooperate with the local fire wardens, timber owners, and others, throughout the entire wooded area of the State.

The protected area, within which the greater protion of the State reserves is located, includes 1,250,000 acres in Forest, Vilas, Oneida, Iron and Price counties. In protective work, over this entire area the State is aided by the Federal Government under the Weeks Law, and by individuals and companies owning large tracts of lands within its borders. This area is divided into 17 districts, varying in size from 66,000 to 138,000 acres. A ranger or patrolman is in charge of each district. Protective work is facilitated by a telephone system, a network of roads and trails, proper means of transportation and lookout towers, the latter making it possible to observe over one-half of this area.

The cost of protecting this one and one-fourth million acres of land was one and one-third cents per acre in 1915. It is proposed to gradually extend the lines of protection as funds and outside coöperation become available.

FOREST FIRE ORGANIZATIONS.

As an example of the development of organized effort of timberland owners in the prevention of fire, the following data was compiled from reports of several associations. Organized effort on the part of timber land owners in this state would do much toward solving the fire problem. An organization covering three or four counties lying contiguous would be the most effective since an opportunity would present itself of close cooperation with the Federal. State and town wardens and patrolmen.

COMPILATION OF DATA ON FOREST FIRE PROTECTIVE ASSOCIATIONS.

Name of Association	Address	Date of report	Acreage protected	Public acreage	Private acreage	Total cost per year	Assess- Max. No. ment per war-	Max. No. war- dens	
Klamath Lake Counties Forest Fire Pro- learity & Association. Douglas County Fire Patrol Association. Coas County Fire Patrol Association. Polk County Fire Patrol Association. Union Willows Counties Fire Association.	Klamath Falls, Ore. Roseburg, Ore. Marahfield, Ore. Dallas, Ore. La Grande, Ore.	1915 1915 1915 1915 1915	449,888 801.557 460,446 117,205 317,913	535, 275	449,888 266,282 460,446 104,618 317,913	\$7,535.26 9,271.54 9,208.92 1,758.08 3,078.95	0.012	1102335	Private, with State Cooperation. State, Federal & Private Cooperation.
Washington Forest Fire Association	Seattle, Wash	1915	2,586,409			46,022.01	88.	3 2	Chiefly a private organization, but co- operates with State & Federal Gov-
Northern Montana Forestry Association Kalispell, Mont	Kalispell, Mont	1915	706,746	1 345,317 2 361,429		1,470.27	10.	19	ernments. State, Federal & Private Cooperation.
Central Fennsylvania Forest Fire Fro- tective Association	Snow Shoe, Pa.	1915	300,000			690.37		58	Private & State Cooperation. Depends on small assessments and gifts from
Pocons Protective Fire Association	Monroe County, Pa	1915	212 mem- bers. No statement			503.06		1-	land owners. Private. Depends on small assessments and contributions for support.
Central West Virginia Fire Protective Association	Elkins, West Va	1915	or acreage No state- ment of			3,828.93		16	Private principally, but receiving aid under Weeks Law.
Kennebee Valley Protective Association New Hampshire Timberland Owners Assn. Vernout Timberland Owners Assn. Northern Forest Protective Association	Bingham, Maine Gorham, N. B. Bloomfield, Vt. Munising, Mich.	1915 1915 1915 1915	acreage 1,250,000 930,540 275,128 1,000,000		930,540 275,128 1,000,000	2,024.86 6,699.07 1,928.09	11/2 mills 8/4c .01	17	Private concerna. Private concerna. Private concerna. Private concerna.

(1) Federal. (2) State & private. (3) Timbered Land. (4) Cutover Land.

FROM 1908 TO 1914 INCLUSIVE.

	Contributing area.	Protection cost.	Annual cost per acre	Average number of fires per year	Average number of acres burned annually	Average number M. B. F. timber burned annu-ally
Potlatch Association Centrater Association Court VAene Association Pend Oreille Association	310,000 411,000 439,000 445,000	£32,080 £22,127 £27,387 \$18,736	\$0.10 \$0.05 \$0.06 \$0.04	1 7 88 97 97 97 97 97 97 97 97 97 97 97 97 97	21, 136 10, 139 2, 815 16, 660	111, 963 165, 462 12, 500 1, 268

LOCOMOTIVE INSPECTION.

The cooperative work with the railroads running through the forest regions of the state has been continued with splendid results during the past two seasons. There has been a steady improvement in the type of equipment used by the various roads and especially in the general upkeep of the spark arresting devices.

Following is the report of Mr. A. E. Hoffman, Merrill, covering the work from May 1, to November 1, 1916.

Wisconsin Conservation Commission,

Madison, Wisconsin

Gentlemen:-

I herewith submit to you my report of locomotives and rights of way inspected for the past six months, ending October 31, 1916.

The following table shows the number of locomotives inspected each month and their conditions:

	Total.	G.	F.	В.	R.	O. S.
May Junc July August September October	102 68 39 90	86 80 56 31 79 112	4 16 7 1 5	5 3 4 2	1 2 3 6 7	1
	521	444	43	14	19	1

The following is a table of the rating of locomotives inspected of the different roads.

The locomotives of the C. & N. W. Ry. and C. St. P. M. & O. Ry. are reported as one for the reason that they are occupying the same round houses in a great many places.

	Total.	G.	F.	В.	R.	O. S.
N. W. Line	. 186	171	7	0	8	0
Soo Line	. 96	92	4	0	0	0
C. M. & St. P.	. 93	85	2	0	6	Ó
Green Bay & W	. 25	20	4	Ō	i	Ó
L. S. T. & T. Ry	. 19	-ã	8	$\check{2}$	Ō	ĭ
Great Northern	16	9	7	ō	Ŏ	Ō
Mar. Tom. & E.		4	i	Ĭ	Ŏ	Ŏ
Wis. & Northern		4	ī	ī	ŏ	Ŏ
D. S. S. & A. Ry	. 4	Ā	Ō	Ō	ŏ	ŏ
No. Pacific Ry	. 3	3	Ŏ	Ŏ	ŏ	ŏ
·						
•	454	400	34	4	15	1

n shop for repairs.

-Ordered out of service.

The following are ratings of the logging locomotives:

	Total.	G.	F.	В.	R.	o. s.
Hines Lumber Company, Park Falls		5	0		1,	
Rib Lake Lumber Company.		•	•	3		0
R b LakeKneeland McLurg Lumber Company,	-	5	0	. 0	1	0
Phillips	. 5	2	1	2	0	0
Rhinelander	. 5	3	0	2	0	0
Park Falls	. 4	3	1	0	0	0
Phelps Bonnell Company, Phelps		4	0	0	0	0
Mohr Lumber Company	_	•				-
Hixon Line	3	1	1	1	0	0
Leons and Northern	3	3	0	0	0	0
Leona	2	1	0	1	0	0
Kneeland & West, Lugerville Foster Latimer Company,	2	2	0	0	0	0
Foster Latimer Company, Mellen	2	2	0	0	0	0
Owen and Northern.		4	U	U	U	U
Owen	. 1	0	0	0	1	0
Soperton	2	2	0	0	0	0
Wells Lumber Company, Ellis Junction Dunbar & Wausaukee Railway,	2	0	1	1	0	0
Dunbar & Wausaukee Railway,	2	1	1	0	0	0
Wausaukee		_	_	•	. •	•
WestboroUnion Land Company,		1	1	0	0	0
Hixon LineTurtle Lake Lumber Company,	2	1	1	0	0	0
Wineger	1	1	0	0	0	0
Vilas County Lumber Company, Winchester	1	1	0	0	0	0
Menasha Paper Company,	•	-	•	•		•
Menasha Paper Company, Ladysmith Foster-Mueller Company, Hilles	1	1	0	0	0	0
Hiles	1	1	0	0	0	0
Stratford	1	1	0	0	0	0
Medford Lumber Company, Medford		0	1	0	0	0
Keith & Heil		1	0	0	0	•
Crandon	•	-			U	0
		1.	0	0	0	0
Park Falls	1	1	0	0	0	0
Gurney Lumber Company, Gurney	1	1	0	0	0	0
	66	45		10	3	-0
	00	40	0	10	3	U

Of the 521 locomotives inspected, 355 head ends were opened.

215 had the 3 x 3 wire mesh.

107 had the $\frac{1}{14}$ x 1½ perforated plate.
14 had the $\frac{1}{14}$ x 2½ wire mesh.
11 had the $\frac{1}{14}$ x ¾ draftac wire mesh.
8 had the $\frac{1}{4}$ x 4 wire mesh.

Of the 521 locomotives inspected, 166 were hot and the front ends were not opened, the ash pans only being examined.

You will note that of the total amount of the large type of engines which numbered 454, but 39 defects were found, or 9 per cent, whereas, of the 67 engines used for logging purposes, 18 defects were found, or 27 per cent. In view of these facts, I believe that time would be well

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spent in keeping a closer watch on the logging engines, rather than calling on the larger round houses so frequently.

The reason of the poor conditions of the logging engines is the frequent changing of crews, and the master mechanic or superintendent of the company neglecting to make personal inspections as to the conditions of same.

Records of head end and ash pan inspections at the larger round houses are kept to date with a few exceptions. Quite a large number of the smaller round houses which are terminals, where they house from two to five engines, keep no record at all.

Of the various kinds of head end spark arresters, now in use, the "Slater Box Front" of the C. & N. W. Ry. is the best. The Master Mechanic front ends used by the C. M. & St. P. Ry., Soo Line, G. B. & W. Ry., and others, are efficient and give very good service if kept in repair.

The "Teepee" stack hood used by the C. M. & St. P. Ry., is a very good one. At that I doubt if it is any better than the one used by the C. & N. W. Ry., which is a much easier one to be made and cheaper in construction. The Soo Line hood is a good one, but a bungly affair, and much more expensive to make than either of the others.

Engine crews with whom I have talked find no fault with the steaming of engines with hoods attached. The objection they have is that the cab is filled with live cinders, making it very disagreeable.

The Soo Line has installed on the sides of all their engines carrying stack hoods, observation windows, which will do away with a great deal of the unpleasant features regarding cinders.

Of all the different styles of ash pans, the hopper slide and C. B. & Q. of the large type of engines is the best. The hopper pan with drop bottom is a very poor one. The only engines equipped with same are the Lake Superior Terminal & Transfer Company of Superior, and they do not leave the yards.

The best pan for the small standard engines is the swipe pan, but I note that the C. M. & St. P. Ry., are replacing same with a shallow hopper pan which is not giving very good satisfaction, by reason of the many openings caused by the slide running through the hopper. The slat bottom pan, of which there are but very few still in use, are the poorest and most dangerous.

Twenty-seven rights-of-way were inspected. Of these, two were found to be "Good." The right-of-way of most of the main lines of the C. M. & St. P. Ry., the N. W. Lines and the Soo Line, are in very fair condition. None of them, however, are strictly within the law, and could be improved upon.

FOREST FIRES IN 1915.

Favorable weather conditions during the past four years have kept the damage of fires to a minimum. At the end of the fire season of 1915, circular letters were sent out to all town fire wardens outside the protected area. The data compiled from the reports of 318 fire wardens is as follows:



LOOKOUT TOWER. 75 FEET HIGH. PENINSULA STATE PARK

BIENNIAL REPORT

Distributed by Causes.	
Lightning	4
Railroads	- 35
Lumbering	2
Brush burning	56
Campers	14
Incendiary	5
Unknown	-52
Miscellaneous	6
Total number of fires	174

The total area burned over, including both timbered and open land, was 46,511 acres, while the damage to timber and improvements amounted to \$28,132. This data is significant, since the season was a very wet one. In spite of this fact, however, many fires were started and considerable valuable property destroyed. In order that we may be prepared for the real dry periods, which are bound to come in the near future, probably within five years, it is hoped that a well organized scheme of forest fire protection may be developed, and that individuals, corporations and other landowners organize forest fire associations and make it possible to cooperate to the fullest extent with the State throughout the wooded regions.

COÖPERATION WITH FEDERAL GOVERNMENT IN FIRE PROTECTION

In 1911 Congress approved an act (Weeks Law) authorizing the Secretary of Agriculture to coöperate with states in the protection from fire of forested areas at the headwaters of navigable streams, and an appropriation was made available for such protection. Under the coöperative agreement, States were obligated to spend an amount equal to the allotment provided by the government. Wisconsin was one of the first states to coöperate and has received an annual allotment of \$4,500.00. Under the agreement entered into in 1916, eight federal patrolmen were appointed by the Conservation Commission for a period of six months and have been given definite districts to patrol and are under the direct supervision of the Head Ranger. During periods of no fire danger these patrolmen are employed in permanent improvement work, such as building trails, fire lanes, telephone lines, roads, etc. A close coöperation exists between the Federal Patrolmen and the State force of eight forest rangers.

PERMANENT IMPROVEMENT WORK

In the development of the forestry work some 37 buildings have been erected to shelter the ranger force at an approximate cost of \$28,600. Two forest nurseries have been established which have an output of 1,000,000 trees annually. Other improvement work includes the building of about 250 miles of roads, 140 miles of fire lanes, and 80 miles of telephone lines.

VALUE OF IMPROVEMENTS AND BUILDINGS ON THE STATE FOREST RESERVES.

37 Buildings	\$28,690.00
37 Buildings	547.00
86 Miles Telephone Lines	3.151.00
Trout Lake Nursery. (Land improvements, water system with power	
engine, fencing, nursery frames, etc.)	4,700.00
Tomahawk Lake Nursery. (Land improvements, water system with	•
power engine, fencing, nursery frames, etc.)	2,600,00
Nursery Stock (Trout Lake)	9.385.00
Nursery Stock (Tomahawk Lake)	1,983.00
Implements, tools, wagons, boats, speeders, furnishings for head-	•
Nursery Stock (Tomahawk Lake)	4,100.00
Total	\$55,156.00

During the fiscal year ending June 1, 1916, the forest rangers have carried on the general lines of improvement work of keeping open the fire lanes, repair of old roads, trails and telephone lines; the protection of the fish and game within their respective districts, thereby cooperating with the conservation wardens, which not only prevents duplication of work, but also makes for efficiency in both branches of the service.

The organization of the forest fire protective force is given in the appendix to the report and sets forth in detail the duties of the rangers in fire protection.

STATE PARKS.

The first State Park in Wisconsin was established by the legislature of 1878. All state land owned by the state in twenty-three townships in Iron and Vilas counties, some 50,000 acres, was set aside with the express provision that "no authority should be given to anyone to cut down or destroy any timber on such lands." For nineteen years this land was held intact. In 1897 the legislature placed the land on the market, and about 32,000 acres were sold. It is of interest to note that most of this same land, which was sold for approximately \$8.00 per acre, was later repurchased by the state for a forest reserve at about one-third of the original price, but with the timber cut. In 1895 a law was passed authorizing the Governor to arrange to acquire 250 acres in what is now known as the Interstate Park, and he was authorized to appoint three Commissioners to examine the land and determine the values. In 1899 the legislature appropriated \$6500.00 for the purchase of the lands, and the remainder from the purchase to be available for the general purpose and care of the park.

The first actual purchase of land for park purposes did not take place until 1901. The state has spent \$291,571.23 for the purchase of lands for state parks, as may be seen from the following tabulated statement:

	Interstate	Peninsula	Devil's Lake	Marquette
1901	\$ 3,635.00 3,557.00 11,959.50 1,600.00	\$49,649.00 30,534.20 15,999.21	\$19,892.30 49,434.86 59,170.28	\$16,158.93 10,000.00 10,000.00 9,980.95
	\$20,751.50	\$96,182.41	\$128,497.44	\$46,139.88

PAYMENTS FOR PARK LANDS.

In addition to the appropriations there has been some income from the sale of old buildings, fuel, leases, concessions, etc., which, with the amount left over from the appropriations, makes up the present "Park Purchase Fund," amounting to \$12,695.46.

All of the state parks have been designated as wild life refuges, and game is increasing in them. Camping sites are laid out on two of the parks, and these are maintained in a clean and sanitary condition. Maps showing the camp sites are in preparation. Campers are charged 50c per week to pay for supervision and annual cleaning of the grounds. They are also required to deposit five dollars with the park superintendent as a guarantee that they will leave their camp site in good condition. Should the site need special cleaning the superintendent deducts the cost from the deposit. Portable camp sites are being leased at \$10.00 per year rental with privilege of renewal. Terrleases of this character have been made to date.

The following rules and regulations have been adopted and are made a part of all leases:

For Fire Prevention: Campers must not leave fires without knowing they are out. Smokers must not throw matches, cigarettes, or pipe ashes where there is a chance of fire starting.

Camping Parties must secure a permit to camp on park grounds from the park superintendent.

Hunting or Trapping or the carrying or using of fire arms is strictly

prohibited.

Trees, Shrubs and Plants shall not be mutilated. The carving or writing on any buildings or rock, and the removal or defacement of signs is prohibited.

Automobile Drivers shall not run their cars above 15 miles per hour

at any time on park roads.

The Prohibition relating to intoxicating liquors on the grounds must

be strictly observed by campers and cottagers.

Boats and Other Property of campers and cottagers must not be tampered with, and glass of any kind, tin cans, or other rubbish that might injure bathers must not be thrown into the lake.

Rowdyism in deportment and profane language will not be tolerated on the grounds. Violaters of this rule will be expelled from the grounds and prosecution will follow if persisted in.

Persons Who Violate any of the Foregoing Rules will be summarily removed from the park and be subject to the laws as provided. The park



VIRGIN FOREST OF MIXED HARDWOODS NEAR EAGLE BLUFF PENINSULA STATE PARK

superintendent is hereby authorized and directed to enforce these rules and regulations and all provisions of the law governing the state parks.

The Active Coöperation of all campers and cottagers is earnestly asked in all matters concerning the welfare of the parks for the preservation of order and proper sanitation."

The total expenditures on the six parks during the fiscal year 1915-16 were as follows:

Devil's Lake Park	\$4,028.44
Peninsula Park	3,824.24
Interstate Park	
Marquette Park	1,378.72
Brule Park	
Cushing Park	295 .00
Value of Buildings on State Parks. Devil's Lake Park. Peninsula Park (buildings) (towers, 2)	
Interstate Park	400.00
Total	\$39,000.00

PROPOSED GIFT OF TREMPEALEAU MOUNTAIN.

This commission takes great pleasure in announcing that, through the great generosity and public spirited act of Mr. John A. Latsch of Winona, Minnesota, Trempealeau Mountain, comprising almost 500 acres, both scenically and historically one of the most interesting points in the upper Mississippi, will soon be donated to the state as a public park. Dr. E. D. Pierce of Trempealeau and other local historians have been endeavoring to secure this property for the public, and through their efforts Mr. Latsch became interested and decided to purchase it and donate it to the county or state. Dr. Pierce and Mr. Latsch at first desired to present this property to the State Historical Society, but were persuaded by Mr. M. Quaife, Superintendent of the Society to turn it over to the state as an addition to the State Park System, since the Historical Society is not organized to administer such a trust.

Trempealeau Mountain was called by the Winnebagos, "Hay-nee-ah-chah" or "Soaking Mountain," and the French voyageurs adopted the native term, but in their own language, and the present term is an anglicized corruption of the latter part of the French designation, and no one who has ever voyaged on the upper Mississippi and has seen from the deck of his boat the lofty crest of the noble peak towering above him as if from midstream, can question the appropriateness of the name.

Father Louis Hennepin discovered Trempealeau Mountain in 1680 and five years later Nicholas Perrot and party going to build a fur trading post among the Sioux Indians, was overtaken by bad weather near this site, and took up their quarters at the foot of the mountain, where they remained until the spring of 1686. Three years later they planted the



LABELED ON PICTURE

arms of Louis XIV and in his name took possession of all the land drained by the waters of the Upper Mississippi. In 1731 a fort was built on the site of Perrot's wintering post by a representative of the French Government.

In recent years the State Historical Society and interested local historians have succeeded in locating the site of Perrot's post of 1685, and Linctot's fort of 1731-36. Several hearthstones were uncovered, one with a rude chimney; a blacksmith forge was found, and many other relics of white occupancy. Thus, of the ten or more forts built by the French in Wisconsin, to Trempealeau belongs the distinction of possessing the only ones whose ruins have been certainly identified.

Before long, under the auspices of the State Historical Society, the mountain will be formally tendered to the State, to constitute forever one of the most interesting spots embraced in Wisconsin's splendid system of State Parks.

INTERSTATE PARK.

This park is owned jointly by Wisconsin and Minnesota, as it lies on both sides of the St. Croix river, which at that point, forms the boundary between the two states. It contains 730 acres, of which 580 acres are owned by Wisconsin and 150 by Minnesota. This park is complete.

The Dalles of the St. Croix are the chief features of the park. The river flows through a narrow gorge in the Keweenawan trap rock, which at one point rises to a height of more than 200 feet. There are several picturesque rock formations, the most interesting of which are "The Old Man of the Dalles" a remarkable profile stone face on the Wisconsin shore, and the "Devil's Chair," a column of rock on the Minnesota side. A series of pot holes, varying in diameter from one to six feet, and in depth from one to eighty feet, are found on the banks, chiefly on the west side of the river. These pot-holes, now to be seen high above the river, were worked into the solid rock by the grinding action of the spherical boulders, many of which still remain in them.

Professor Martin, in "Physical Geography of Wisconsin," says:

"Before the Glacial Period the upper St. Croix had a course to the West in Minnesota. Its middle course in the St. Croix Dalles is postglacial. Before the Glacial Period its lower course was occupied by a short stream, whose headwaters were the Apple River, tributary of today. The St. Croix River was the outlet of two of the glacial lakes in the Lake Superior basin, north of Stillwater, Minnesota, the valley is fairly wide, with gently sloping terraced sides" * * *

"The rock ledges (at the Dalles) are ancient lava flows, of which seven may be identified rising like giant steps above the river. The lava or

"The rock ledges (at the Dalles) are ancient lava flows, of which seven may be identified, rising like giant steps above the river. The lava or trap, is well-jointed, so that there are vertical precipices and isolated

crags along the St. Croix river."

The general improvement work on the park has been under the supervision of a park superintendent. Much of the wooded area has been cleared of underbrush, trails and bridges have been repaired, and the dead and down trees have been cut, from which over 43,000 feet of lumber was



LOOKOUT POINT. MARQUETTE STATE PARK

sawed. A portion of the lumber has been used in building a tool house near the ball ground which will also afford a dressing room for the players.

The baseball ground has been developed on the upper end of the park, midway between the towns of St. Croix Falls and Taylor's Falls, the towns subscribing \$423.00 and \$119.00, respectively, for the work. The time of the superintendent in supervising the work was donated by the state, together with other expenses, amounting to \$147.00.

During the next two years the road south through the park should be improved to the southern boundary, since it is expected the town of Osceola will continue this road from the park boundary south, making all parts of the park accessible to the public.

Considerable forest planting on the open fields is contemplated during the spring of 1917. A bath house will be erected on Thaxter Lake, which lies entirely within the park.

On the rock bluffs, white and red pine and oak abound. The hills farther back are covered with mixed hardwoods, and the bottom lands are covered with elm, silver maple and hackberry.

MARQUETTE PARK.

The Marquette State park is located in Grant county in the angle formed by the confluence of the Wisconsin and Mississippi, and includes the bluffs along both rivers. The greater portion of this land was the old Glenn homestead and it was due to the efforts of Senator Robert Glenn that the natural beauties were preserved, as he for a long time had in mind the idea of this area becoming a great natural playground for the people of future generations. The park is complete and contains 1651 acres. The Military road terminates on the park, the highest point being some 500 feet above the Mississippi, and 1180 feet above sea level.

None of the natural beauties of the park have been destroyed, although some of the upland has been cleared, thus giving a variety of scenery. The site of the first fur frading post established on the upper Mississippi is on the park. Above the narrow crest of Sentinel Ridge, overlooking the Mississippi, is located one of the finest groups of Indian mounds in this section of the state. This system is over one-half mile in length, and is known as the "Procession of Mounds" consisting of 14 conical, 13 linear and a single effigy mound. These mounds were marked by the Wisconsin Archaeological Society in 1911, the tablet bearing this legend,—

"PROCESSION OF MOUNDS"

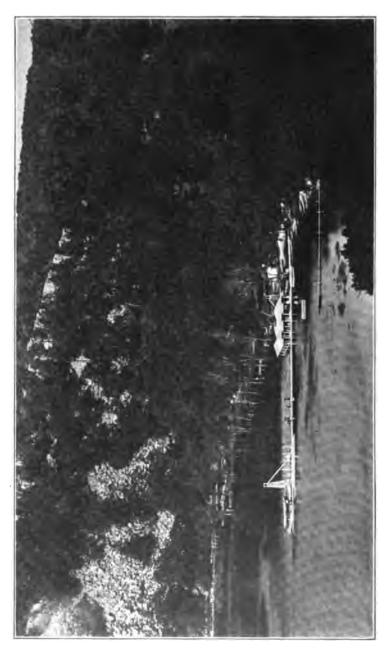
Length about one-half mile.

Marked by the Wisconsin Archaeological Society
September, 1911.

Effigy mounds of deer and bear, linear, chain and burial mounds are common.

Father Marquette, and his associate, Louis Joliet, the great explorers, discovered the Mississippi river from Point Lookout, on their voyage of discovery in the year 1663. Other points of interest are Sunshine Hill,

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Signal Hill, Eagle Eye, Black Hawk Monument, Roll-away, Linden Valley, Winnoshick and Glen Grotto, a brilliantly colored sandstone cave, with water falls tumbling over its sides, making it one of the beauty spots of the park. About 450 acres of the park land have been cleared. The balance is well wooded, consisting of such species as white, red and black oak, basswood, sugar maple, aspen, and white birch on the upland and slope types. In the hollows may be found ash, basswood, slippery elm, black walnut, butternut, mulberry, and honey locust. The bottom land type is composed mainly of silver maple, white elm and river birch.

The many points of interest on the park are being made accessible by the construction of three miles of standard road, which lead to Point Lookout; to Sentinel Ridge, winding in and about several Indian mounds, and down through a long hollow to the Burlington Railroad, where a station will be erected by the railroad company, thus making it possible for pleasure seekers to reach the park in the shortest possible time. Further appropriations should be made to extend the road system to Walnut Eddy on the Wisconsin river, a distance of one and one-fourth miles. Many trails should be laid out, the superintendent's house repaired, fences built and other improvements necessary to the comfort of visitors.

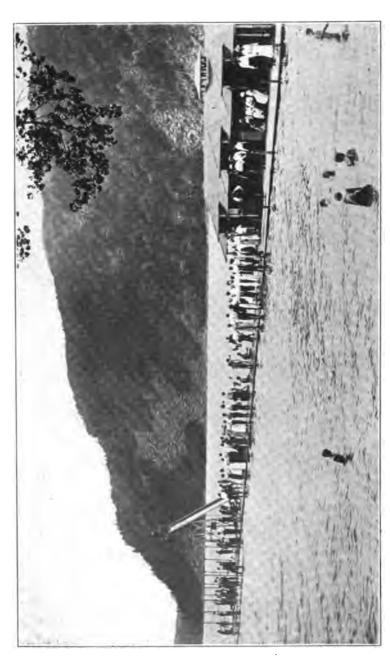
DEVIL'S LAKE PARK.

The Devil's Lake Park contains 1040 acres surrounding the lake, and is the most centrally located of the state parks, being accessible both by rail and automobile from all points. It has long been a playground of the people and the summer hotels have had a large number of guests annually. It is located in Sauk county, near Baraboo. The surface of the lake lies 600 feet below the east bluff, which is itself some 1400 feet above sea level. It is a beautiful sheet of water, without a visible outlet, fed by springs, and surrounded by great crags and bluffs of rock, thrown up by volcanic action of some former age.

The lake is one and one-fourth miles long, one-half mile wide and 43 feet deep, and is enclosed on the east, west and south shores by rugged bluffs of Baraboo quartzite. The north and southeast ends are filled with glacial drift, in fact this glacial drift has formed the lake basin by damming up both ends of the older gorge. The bluffs are without glacial drift, and the limit of the driftless area, is sharply defined. The geology classes of the University of Wisconsin and the University of Chicago spend several weeks in field work on the park and the surrounding country annually. President Van Hise of the University of Wisconsin, one of the most distinguished geologists in the country, has said, "I know of no other region of the state which illustrates so many principles of the science of geology."

There are several interesting rock formations, the most remarkable ones being known as the "Doorway," the "Needle" and "Turk's Head." Some interesting Indian mounds are found on the park, the most striking being an eagle mound on the southeast shore.

The rough topography of the park and the surrounding region prevented clearing, so the percentage of forest area is large, and the native flora and fauna has survived remarkably well.



The native flora is extremely varied and natural conditions will be maintained so that the botanist will find not only the species, but also the ecological conditions under which they grow. River birch is found along the lake shore, mixed hardwood stands occur on the higher land, large white pines occupy the rocky slopes, and the tops of the bluffs are covered with oak. The chief sports are boating, fishing, swimming and climbing. Excellent sand beaches with a uniform and gradual slope are found at both ends of the lake. Many of the visitors make a practice of climbing some of the bluffs daily, and while the slopes are not nearly high enough to be considered mountains, they are steep and rugged enough to make it extremely interesting if one deviates from the trails, as many do.

Many permanent improvements are contemplated on the park. usefulness as a playground has grown to a wonderful degree in the past two years, and will increase rapidly in the future. The development of roads, the repair of the hotel buildings and cottages, and the construction of sanitary closets, at both ends of the lake, the installation of water systems, and the general improvements of all playgrounds are planned. The new road from the hotel east to the park boundary is practically complete and will become a part of the state highway system, upon the completion of the road from the east park boundary to the old road near Zauft's farm. This new route will make the park easily accessible from the south and east. Plans and estimates of costs of a road around the south end of the lake will be made by engineers of the State Highway Commission. Another project under consideration is the proper location of a road at the north end of the park. This route will also be surveyed with the idea of cooperating with the town and city of Baraboo in selecting the most suitable location. Another matter of the greatest importance is the purchase of the three remaining properties bordering on the lake. One fifteen acre tract at the north end is in process of condemnation. The other two properties should be condemned and purchased. It is recommended that \$40,000 be appropriated to purchase these properties and the remainder of the interior holdings within the Peninsula State Park.

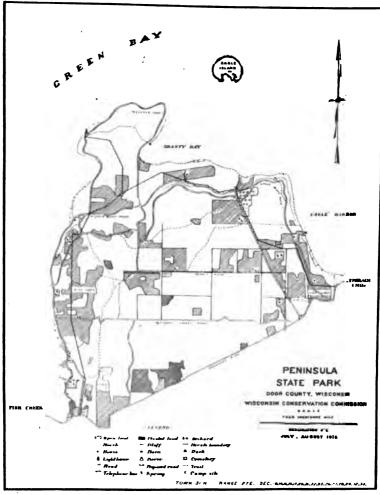
PENINSULA PARK.

Peninsula park is the largest of the state parks, containing approximately 3,240 acres, and is located on the Door county peninsula, between Fish Creek and Ephraim. The remaining interior holdings, consisting of woodlands and farms, amount to about 465 acres, and 10 lots and parcels. One forty acre farm has recently been purchased at a cost of \$650.00. The state now has under option 160 acres of farm and woodland property, for a price of \$6,150.00, which upon the completion of the purchase will leave a balance of about 300 acres and 10 lots and parcels to be added to the park. It is estimated that the remaining interior holdings can be purchased for \$14,000.

This land should be added to the state's holdings. The sums available in the park purchase fund will undoubtedly be sufficient to pay for these properties as they are offered for sale in the future.

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The park is well timbered. The flora is not extensive, but the forests of white and red pine, hemlock, balsam and hardwoods, are beautiful. Several stands of beech show a forest type that is rather unusual. Dense stands of white cedar are found along the shore, while in some of the fields,



GENERAL MAP OF PENINSULA STATE PARK

juniper and more rarely the shrubby yew (Taxus canadensis) give an effect of formal planting.

It is planned to not only make the fullest use of the park as a great pleasure ground, but also to so manage the wooded areas, totaling 2,770 acres, that there will be a sustained yield of forest products. A complete forest working plan has been prepared for the ensuing ten years. The

total estimate of the standing timber amounting to 4,812,987 feet on the park is as follows:

Species	Board Feet	Cords	Posts
Balsam	274,951		27,420
White pine	455,594 283,970 1,765,520 598,430		27,420
Birch	894,808 131,840	3,233	
AshPoplarOak	30,164 377,710	1,929	
Total	4,812,987	5,651	27,420

^{*}Reduced 30% for defect. †Reduced 20% for defect.

Fifty acres of open fields along the boundary road were planted to coniferous stock of the following species, during the spring of 1916.

White pine Red pine Scotch pine White spruce	12,000 10,000
	66.250

There are remaining some 500 acres of open land suitable for forest planting. It is planned to reforest the entire area, spreading the work out over a period of 10 years, or fifty acres per year. The trees will be supplied from the state nurseries at Trout Lake and Tomahawk Lake.

Many improvements are contemplated. The great need is good roads and improvement and repair of the many cottages now on the park, all of which are in a dilapidated condition. The golf links, on either side of the park, are now being used by the followers of the game. Roads and numerous trails make all parts of the park accessible.

The numerous harbors along the peninsula make sailing or motorboat cruising safe, and boats from the various yacht clubs are often seen at anchor in the harbor at Eagle Island. Door county is a favorite region with motorists, and many cars come to the park each year. The park is reached by motor-stage from Sturgeon Bay or by boat from Marinette. Others come from the lower ports on Lake Michigan on the Goodrich line steamers. Good hotel accommodations are found at Fish Creek

100 Wisconsin Conservation Commission



EAGLE BLUFF. PENINSULA STATE PARK



MACADAM ROAD. BOUNDARY OF PENINSULA STATE PARK

and Ephraim, both villages adjoining the park. Camp sites may be had by applying to the superintendent, and several unfurnished houses may be leased for the season.

Two lookout towers to aid in detecting forest fires have been erected on Sven's Bluff and Eagle Bluff, which are connected by telephone with the superintendent's residence and the local exchange. As these towers are built with railed stairways and landings, they may be climbed safely by anyone, and visitors to the park find the views well worth the climb. From both towers, buildings in Marinette, eighteen miles across the bay, may be seen on clear mornings with the naked eye.

Maps of the park showing all wooded areas, fields, roads, buildings, trails and lookout towers, are now being prepared and will be available at all of the hotels in the region.

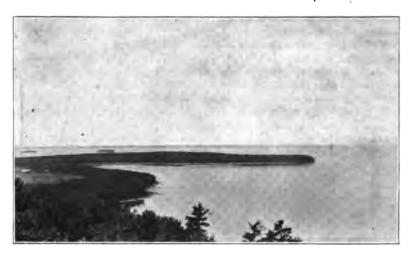
BRULE PARK.

A part of the Nebagamon Lumber Company grant of 4,321 acres of land along the Brule river, a famous trout stream, in Douglas county, has been set aside as a state park and is being managed as such. It is located between the Northern Pacific and the Duluth, South Shore and Atlantic railroads and is within easy walking distance from the Brule and Winneboujou stations. Twenty-seven lots have been laid out along either side of the river in Section 23. These cottage sites will be leased either for portable or permanent buildings for periods of from one to twenty years, as desired. Approximately three-quarters of a mile of new road was opened up adjacent to the lots on the east side of the river, which connects on the west end with the proposed road through the recently platted Heimbaugh and Spring addition. When this road is completed, it will, in all probability, be the main road between Brule and Winneboujou. Because there is but little timber growth on the lands, the greater part of the river lots, as well as some fifty acres of hill land on the west side of the river, was planted to coniferous forest trees to the amount of 72,000. The needed protection from fire has been given the plantations by opening the old logging railroad grades, which makes all parts of the planted areas accessible.

CUSHING MEMORIAL PARK.

The Cushing Memorial Park is located about a half mile west of Delafield, Waukesha county, on the site of the old Cushing homestead. It comprises about eight acres, one-fourth of which is low and marshy, along the Bark river, the remaining portion rising slowly in a dry even slope. At the crest of this slope is located the shaft erected in memory of the "Three Wisconsin Cushings," while on the site of the old farm home, no traces of which remain, but in which two of the boys were born, a large stone marker has been placed.

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LIGHTHOUSE POINT AND SHANTY BAY FROM LOOKOUT TOWER. PENINSULA STATE PARK



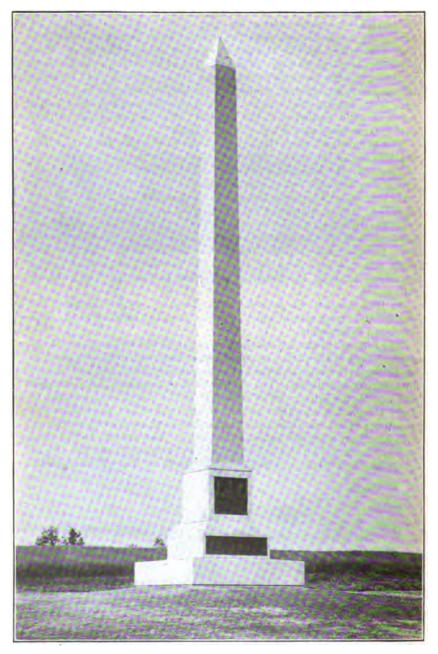
AN EFFORT AT "FORMAL" PLANTING BY NATURE PENINSULA STATE PARK

The three Cushings, William B., Alonzo H., and Howard, won unusual distinction for bravery during the days of the rebellion. William B., practically single handed, sank the ironclad ram Albemarle, which has been pronounced by Col. Roosevelt as one of the most daring deeds on the pages of naval history. Alonzo H., fell at the crest of the battle of Gettysburg, after being shot four times. He did much to turn Pickett's charge and to win the day. Howard B. the third brother, was in command of a troop fighting the Apaches in the southwest, and lost his life in a hand to hand conflict with the Indians. No other Wisconsin family perhaps, produced such a trio of brave fighters.

The Waukesha County Historical Society was chiefly instrumental in the creation of this park. The land was donated by various citizens to the Society, who accepted it in trust. Later when the erection of an appropriate monument was considered, and because the funds of the society were insufficient to erect a suitable monument, the aid of the state was solicited. The legislature of 1911 authorized the Governor to coöperate with the Historical Society in the erection of a monument to mark the birth place of the Cushings. As a result, \$5,000 was appropriated and a very imposing and beautiful obelisk was erected in their honor. This shaft was dedicated May 31, 1915. The unveiling was done by Miss Catherine Cushing, the daughter of William B. Cushing, who sank the Albemarle.

In 1915 the park was turned over to the state and was placed in the regular state park system which is under the administration of the Conservation Commission.

The foreman of the fish hatchery at Delafield has direct charge of the management of the park. A road has been constructed into the grounds and around the monument, the funds being largely subscribed by Delafield and Waukesha citizens. The Conservation Commission has beautified the site by the setting out of trees and shrubs. It is contemplated to fence the park in a suitable manner in the near future, to continue the planting of trees and shrubs and to make other necessary improvements, which will preserve and enhance its beauty. The expense to the state will be very small for this work, and is warranted by the use the general public will find in this park and the high purpose for which it was created.



CUSHING MEMORIAL MONUMENT

STATE FOREST NURSERIES.

By C. L. HARRINGTON.

The state forest nurseries were established for two reasons:

- 1. To furnish plant material for the restocking of lands unsuited for agriculture, and park properties owned by the state.
- 2. To furnish planting stock, at the cost of production, to private land owners who desired to reforest their holdings.

The second reason was adopted primarily to encourage forest tree culture in the state. With the gradual depletion of the original forests in Wisconsin, leaving millions of acres of cut-over land, the poorest of which will not be settled for a century or more; with the problem of encouraging tree planting on the hundreds of thousands of acres of rough, very stony, or non-agricultural lands on Wisconsin farms, and with the need for the planting of windbreaks or shelter belts in the prairie regions of the state. arose the question of providing a source of planting material, which would be cheap, acclimated and free from destructive diseases or pests, which might jeopardize the growth of other trees in the state. The same questions had already risen in states along the Atlantic and had been solved by the establishment of forest nurseries in over twenty of the northern states. These nurseries have grown to enormous extent, those of New York alone furnishing from three to five million trees for planting to private land owners annually. In establishing nurseries, Wisconsin was guided by the experience of the older eastern states.

The need for state-grown planting material is especially emphasized at the present time. An outbreak of the white pine blister rust was discovered early this summer in Polk county in a plantation started from stock which had been imported from Germany. This disease is especially destructive to white pine, young or old, for no infected trees have ever been known to recover from its ravages. As a result of this discovery, the State Department of Entomology and Nursery Inspection placed a quarantine on the importation of all five needle pines into this state.

The sentiment regarding forest tree planting in the state is yearly becoming more favorable. As the need of tree culture in the economic development of the state is more clearly realized by the average citizen, the work of the reproduction of timber stands on lands primarily suited for this purpose will increase.

At the present time two forest tree nurseries are maintained by the State Conservation Commission, one located at Trout lake, which embraces about seven acres, and the other at Tomahawk lake, includes about four acres. The Trout lake nursery is primarily suited for the development of



YOUNG WHITE PINE TREE ATTACKED BY BLISTER RUST. NOTE THE FRUITING BODIES

coniferous species, being located on a sandy loam soil. The Tomahawk lake site is composed of heavier soil and is intended more for the raising of the broad leaved trees. Each nursery is equipped with the necessary fences, roads, shade frames, tools and watering facilities to properly care for and protect the growing seedlings and transplants to all times of the year.

The nursery work under the administration of the Conservation Commission has experienced a healthy growth. During the spring of 1916, 1,501,000 two-year seedlings were transplanted at an average cost of 85 cts. per thousand. These transplants were composed of the following species:

NUMBER OF TRANSPLANTS

Trout Lake Nursery. Tomahawk Lake Nurs.

White pine	220,000 648,000 88,000 102,000	222,600 220,400
•	1.058.000	443,000

SEED BEDS WERE SOWN AS FOLLOWS:

Trout Lake Nursery. Tomahawk Lake Nurs.

White pine	50	20
Red pine	20	
Scotch pine	66	10
White spruce	15	10
White ash	19	3
Basswood		ž
•	157	53

The results of this work were fairly satisfactory. The extreme dry spell in July caused the loss of some of the transplants, but the heaviest damage was done by the June beetle grubs. These occurred in unusual numbers. They work underground, chewing off the roots of the trees, thus causing them to wither and die. They are especially destructive to transplants. At present no effective way has been discovered to combat them. In ordinary years the damage from this cause is light, but during years when the grubs are unusually numerous, their work is very destructive and this is especially true on new land.

Except for the practical failure of the Scotch pine seed beds, due to the long storage to which the seed had been subjected on account of the war, the sowing of 1916 was of average success. Very good stands of white and red pine and Norway spruce were obtained.

STOCK DISTRIBUTION.

The distribution of nursery stock throughout the state was especially noteworthy during 1916. The following tables give complete data relative to these shipments. Especial attention is called to the steady increase in the shipments to private parties.

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From Tomahawk Lake	Wt. Sp ORDER	Total	2-2	2-2 4,000 41,250 66,250 200 72,000 72,000 18,000 75,000 6,800 72,000 16,500 6,000	41,250 18,000 18,000 2,100 12,000	41,250 18,000 12,000 12,000	41,250 18,000 12,100 12,000	1,260 1,260 1,200	25.25 25
From Toms	White Pine V	2-2	_	37,250 4			37, 260 18, 000 12, 000	37,250 18,000 12,000	37, 260 18, 000 12, 000 12, 000
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	Pine	2	_		12, 000				
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1916 State shipments......171, 150

Frivate supposed (1914) — 20, 200
Private shipments (1916) — 77, 350
Private shipments (1916) — 110, 200
(2-2)—2 years in seedleed and 2 years in transplant bed.
Norm: 40,000 confirst were planted on state lands in the fall of 1916



PORTION OF NURSERY. TROUT LAKE

' Note: Original pine forest in the middle and left background; new plantations in the right background.



A PORTION OF THE STATE FOREST NURSERY. TROUT LAKE

STATE NURSERY INVENTORY July 1, 1916.

	_						-
		Years	ä			1917	
. Species	Number	Seed Bed	Trap. Bed	Source of Seed	Condition	price per M	Value
White Free White Pree	227,305 220,000 200,000 320,000	01 01 01 00	8-00	Collected 1911	6" — 15" tall. Good. 2" — 5" tall. Good. 4" — 10" tall. Good. 2" — 6" tall. Good.	2.4.8.9. 8883	81,136.53 880.00 800.00
NOTES PIRE, consequentional properties and properti	403,270 648,000 100,000	999	0 H O	NE For. Co. 1912 NE For. Co. 1912 NE For. Co. 1912	4" — 12" tall. Erc. 2" — 6" tall. Good. 2" — 8" tall. Erc.	6.4.8 8.83	2,016.85 2,502.00 250.00
Sootch Pine Sootch Pine Sootch Pine	88,000 50,000	818189	≈ ⊣0	D. Hill (Ger.) D. Hill (Ger.) D. Hill (Ger.)		2.60 2.50 50 50	25.25 125.28
Normay Spruce	102,000	88	87-	D. Hill (Ger.) D. Hill (Ger.)	3" - 6" tall. Exc. 1" - 3" tall. Fair.	5. 4	10.00
Austrian Pine	10,000	m	•		5" - 9" tall. Good.	2.50	25.00
Col. Blue Spruco	23,000	87	89	D. Hill & Co.	3" - 7" tall Good.	2.00	115.00
Sitks Sproce	25	4	•		3" - 12" tall. Good.	8.00	
Douglas fir	16,000	က	•		2" - 3" tall. Fair.	2.50	40.00
White Cedar	10,000	4	•		1" - 7" tall. Fair.	3.00	30.00
Totals	2,420,875						\$9,385.38
Tomahawk Lake.							
White Pine	31,000	0101	10 H		7" - 15" tall. Good. 2" - 16" tall. Good.	\$6.00	\$ 186.00
Norway Pine	220,400	Ç.	-	Change of Change and Committee of Change and	2" - 6" tall. Good.	4.00	881.60
With Sprace and the sprace of	4,300	68	20		4" - 12" tall. Good.	6.00	25.80
Collegenment of processing the Christian parameter parameter processing of herefolders	478,000						\$1,983.89
Grand Total	2,899,175						\$11,369,18

Norm: These figures are exclusive of the 1916 seeding.

112 Wisconsin Conservation Commission

The prospects for a reasonable expansion of the activities in the state nurseries during 1917 are encouraging. Inquires from various parts of the state indicate that a good demand for planting material may be expected. Plans are under way for the better handling of all tree shipments and for transplanting and seeding. The Wisconsin forest nurseries should experience the same healthy growth during the coming five years that has characterized the state nurseries in the east, and particularly the New York nurseries.

FOREST PLANTING.

During 1916 approximately 211,000 conifers were planted on state owned lands, while 110,200 plants were furnished private parties, at cost, for planting in the state. The main planting activities on the part of the



PLANTING CREW AT WORK. TROUT LAKE

Note: Cost of planting this type of land will average about \$800 including the cost of the planting stock.

state, were confined to the State Park lands. At headquarters camp, in the vicinity of Trout lake, about 15 acres were planted to mixed pines during the spring season, while about 35 acres were planted in the fall. These were in the nature of experimental plantings. The planting work in the State Parks was carried forward very energetically, and exceptionally good results were obtained.

The weather conditions during the planting season were very favorable. The days were cool and considerable rain fell.

The following data gives the number of trees planted on lands owned by the state in 1916.

BIENNIAL REPORT

Trout Lake (Headquarters)	16 500
Four Lake (readuraters) Spring Planting. Fall Planting. Peninsula State Park. Brule River State Park. Devil's Lake State Park. Wild Rose Fish Hatchery. Woodruff Fish Hatchery.	40,000
Brule River State Park	72,000
Wild Rose Fish Hatchery	5,000 6,800
Woodruff Fish Hatchery	4,600
	211.150

The following table shows the amount of stock shipped for planting to private land owners in the state, tabulated by counties, since shipments were started from the state nurseries:

TREES SHIPPED TO PRIVATE LAND OWNERS-BY COUNTIES.

County	1914	1915	1916	Total
Barron. Calumet			7,500 600 3,500	7,500 600 3,500
Columbia Dane Dodge			1,000 8,000 500	1,000 8,000 500
Douglas Eau Claire		51,000	60,000 5,350	112,000 5,350
Piorence Jackson Lafayette	6,000	3,000 1,000	100	9,000 100 1,000
Milwaukee. Oneida. Pierce Portage. Price		450 300 3,200 3,400	4,000 400 300	4,000 856 600 3,200 3,400
Racine Trempealeau Sheboygan Vernon	10,000	14,000	1,000 2,400 300 1,300	1,00 12,40 14,30 1,30
Vilas Rusk Washburn Washington	1,400 1,300	1,000	10,500 500 500	2,00 10,50 1,90 1,30
Waupaca Waukesha			250 2,200	2,20 2,20
	20,200	77 ,350	100,200	207,85

The following table gives the total acreage planted on state owned lands:

Star Lake	Ac	r
Trout Lake		4
Rest Lake	1	1
Muskalonge Lake		•
Peninsula Park		
Brule River Park		•
Wild Rose Fish Hatchery	••••	
Woodruff Fish Hatchery		
		_

114 WISCONSIN CONSERVATION COMMISSION

The success of the plantings may be judged by the following percentage of living trees at the end of the first season's growth, based on actual counts:

	Survi
Star Lake	
Trout Lake	
Rest Lake	
Plum Lake	
Muskalonge Lake	
Peninsula Park	
Devil's Lake Park	
Brule River Park	
Wild Rose Fish Hatchery	
Woodruff Fish Hatchery	
Tomahawk Lake	

Up to the present time, the conifers and especially the white and red pines and Norway spruce have been advocated for general planting in the state. The Commission has deemed it advisable to enlarge on this



NORWAY SPRUCE PLANTATION 18 YEARS OF AGE

policy so as to include the best broad-leaved trees. From the standpoints of beauty, rapidity of growth and commercial value, the basswood, red oak and white ash are considered to be the best species, and these will be grown in the nurseries. These trees will be ready for distribution during the spring of 1918. They are of particular value for planting in the hardwood belt in the southern part of the state, but also are very well suited to the heavier soils in the northern counties.

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Forest tree planting on the part of private land owners is constantly encouraged by the Conservation Commission. In order to stimulate these activities planting plans are prepared for land owners, and thrifty planting stock is supplied from the state nurseries at cost. This cooperative effort to encourage tree culture in the state has met with a reasonable response from land owners, as the sales of planting stock will verify. It is safe to predict that this opportunity offered by the Commission will be taken advantage of in an enlarged way in the future. The order blank adopted by the Commission, and the 1917 price list for planting stock follows:

WISCONSIN CONSERVATION COMMISSION Madison, Wis.

Price List of Planting Stock

Gentlemen:

No order granted for less than 100 trees. Extra charge of 50 cts. per order will be made on lots of less than 1000. Prices are F. O.B. at Trout Lake or Tomahawk Lake. You will be notified if supply of certain stock is exhausted on receipt of your order. Please send full purchase price with all orders.

Amount of Remittance: \$.....

Species	Number of trees desired	Price per M.	Age (Years)	Height inches	Cost
White Pine Seedlings		\$2.00	2	2–6	
White Pine Seedlings		2.50	3	4-10	
White Pine Transplants			4	6-15	
White Pine Transplants			3	3–8	
Red Pine Seedlings*			3	4-10	
Red Pine Transplants			3	5-10	
Red Pine Transplants	 	5.00	4	6-14	
Scotch Pine Seedlings			3	4-8	
Scotch Pine Transplants			3	5–10	
Austrian Pine Seedlings		2.50	3	5–9	
Norway Spruce Transplants	 	5.00	4	3–8	
White Spruce Transplants		5.00	4	4-12	
Col. Blue Spruce Trspts		5.00	4	3–7	
Douglas Fir Seedlings		2.50	3	2–4	
White Cedar Seedlings		3.00	4	2-8	
Takal					<u> </u>
Total	[l	<i>.</i>	1	

^{*}Another name for Norway Pine

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116 Wisconsin Conservation Commission

Ship to		Ship by	Express Parcel Post
Name	***************************************		•
•	Packed b	y	•••••
Address	•••••	-	
	Date Ship	p ped	
Exp. Office			
Description	on of Land to be Pla	nted	
Topography	Kind of s	oil	••••••
Original growth			
Previous use of land			
Remarks			
Date Bec'd	Tree Order No	n	

EXTENT, VALUE AND USE OF WISCONSIN WOODLOTS.

By C. L. HARRINGTON.

The real importance, extent or possibilities of the farm woodlots in Wisconsin are but little appreciated by the average citizen of the State. This perhaps is the chief reason why the average farm woodlot is mismanaged. A woodlot properly located and cared for is an essential part of the well-managed farm. It is highly important that this part of the farm should receive its proper share of attention in order that the benefits arising from its presence may be realized to their fullest extent. These benefits are of material importance to every citizen and to the general prosperity of the State. In brief they are as follows:

WOODLOTS.

- 1. Produce a valuable crop—fuel wood, poles, posts and timber material.
- 2. Beautify the landscape and hence make for more comfortable and desirable living conditions.
 - 3. Form wind breaks.
- 4. Furnish shade for cattle and horses without being damaged, if properly managed.
 - 5. Harbor bird and animal life.
- 6. Tend to regulate the rate at which surface water is carried off and in this respect they are of great importance on steep slopes.

Any one of these six points is sufficient to warrant the maintenance of a woodlot and in the aggregate they furnish a preponderance of evidence in its favor.

The extent of the farm woodlots in Wisconsin may be realized from the following statistics as given by the U. S. census of 1910:

Total land area in Wisconsin	35,363,840 acres
Improved land	11.907.606 acres
Unimproved land	9,152,460 acres
Woodland in farms	5,317,652 acres

From these figures it can be seen that the woodlots cover an area of almost five and one-third million acres, or about 15 per cent of the total land area of the State. Wooded lands on farms, of course, are distinct from lands that are primarily forested. Thus in Dane county, embracing

769,280 acres, and one of the most highly developed agricultural regions of the State, we find 95,976 acres in woodlots, whereas, in Iron county containing 506,880 acres, most of which is still in the wild state, we find only 4,662 acres in farm woodlots. Their extent depends entirely upon the agricultural development of a region. Using this classification the State may be divided into three main divisions as follows:

- 1. The southern counties such as Rock, Green, Walworth, Dane or Dodge, in which agriculture is of major importance, and where the wild lands are very limited. In counties of this type, the woodlots are small on the average, but they have a definite place in the management of each farm. An interest is usually taken in their development, and a plan for intensive encouragement is feasible and practical.
- 2. Counties in the central portion of the state, such as Clark, Waupaca, Chippewa or Langlade, where agricultural development is far advanced, but in which the cut over or forested lands are still of great extent. In these counties the woodlots are just beginning to receive some consideration from farm owners, but very little is done in the way of definite improvements. The woodlot is not as yet recognized as an essential part of the general farm, because of the vast amount of wood material which is still found in all parts of these counties.
- 3. Counties in the northern part of the state such as Iron, Forest, Vilas, Sawyer or Marinette, which contain a vast acreage of cut over or timbered lands, and in which agricultural development is still in its infancy. In these counties the woodlot is of minor importance at present, although plans for its proper development can be reasonably considered at the present time.

The value of the wood material on the five and one-third million acres of woodlots in Wisconsin would exceed fifty million dollars at the very conservative estimate of ten dollars per acre. Each year hundreds of thousands of cords of firewood and millions of feet of saw logs are hauled from these woodlots, besides great quantities of poles, posts and ties. The value of these products is difficult to approximate, but it is of great importance to the rural communities. But this does not limit the value of the farm woodlot. The birds and small animals are man's best aids in controlling the insect world, and consequently their depredations, on crops, cattle and even mankind, and these are always harbored and encouraged in woodlands. In mitigating the severities of the winds, small stands of timber are of the utmost importance. The woodlot affords those beauties to the landscape of a farming community, the lack of which makes prairie regions so desolate. As a means of preventing severe gullying on steep hillsides or on very light soils, tree growth cannot be excelled. Practically every farm in the state has some land on which a woodlot could be profitably located. In the southwestern portion of the state, where the lands are rough and hilly, the woodlots are best located on the steep slopes, the narrow ridges, or the rock strewn hillsides.

In the central and eastern counties the woodlots should be so located as to give protection from the prevailing winds, or on a lean, stony or eroded portion of the farm. In all parts of the state there are lands unsuited for cultivation, and on such sites quick growing tree species should be planted. It requires very little effort after a woodlot is once started,

according to the proper methods, to keep it in good condition. It is always better to have a valuable crop growing slowly on a poor piece of land than to have the site remain completely idle.

The oak woodlots of the southern and particularly the southwestern counties are the best to be found in the State. In many instances the woodlot is located on a piece of land which could be used to better advantage if tilled, or, on the other hand, lean, rocky, or very rough sites are cultivated or pastured, which, if used for tree growth would yield better returns, while the more suitable lands could be cultivated.

The growing stock in the central and northern counties has been so depleted in many instances, that but little reproduction can be expected, and generally the new stand of trees in such circumstances is composed chiefly of inferior species. The condition of the average woodlot is sure



EFFECTS OF GRAZING IN THE WOODLOT REPRODUCTION ENTIRELY LACKING

to be bad, if the owner cuts his timber with no thought to the future, and is generally indifferent to the advantages gained by the best methods of woodlot development.

Consider the possibilities that lie in the way of better woodlot management. The well managed stand of forest trees should produce from three-fourths to one cord of wood material per acre per year. This crop is grown on lands that are unsuited or inferior for tillage or pasture purposes. It is a clear gain from lands that would otherwise remain idle. If we assume that under the present conditions of management, the average woodlot is producing ½ of a cord of wood material per acre per year, the 5½ million acres yield over 650,000 cords. Figured for fuel purposes, perhaps the lowest economic use to which this material could be put, its value would exceed a half millions dollars. With proper methods of management, this yield could be doubled and even tripled in a few years, and eventually the yield would equal nearly one cord of wood material per acre per year. To Wisconsin, a State possessing no coal and with fuel costs constantly

increasing, this product is of especial importance and, if coupled with the other advantages which spring from this source, it undoubtedly warrants better methods of management in the average farm woodlot.

Just what constitutes better silvical systems as applied to woodlot management cannot be discussed here, because of the great diversity of conditions that are met with in the state. Every woodlot has its own problems. The pine stands of the sandy regions of the state require different treatment than the oak woodlots of the southern counties.

With a view towards determining the best systems of management that can be applied in Wisconsin, the woodlots of the following counties, and all factors that might influence their development, have been studied.

A		01	m
Adams	Fond du Lac	Ozaukee	Trempealeau
Ashland	Green	Polk	Vernon
Barron	Jefferson	Portage	Walworth
Bayfield	La Crosse	Richland	Washburn
Calumet	Langlade	Rock	Washington
Crawford	Lincoln	Rusk	Waukesha
Columbia	Manitowoc	Sauk	Waupaca
Dane	Marathon	Shawano	Winnebago
Dodge	Marinette	Sheboygan	
Donglas	Ocento	Taylor	

It is planned to issue reports from the data compiled during these studies for those regions of the State in which woodlot conditions are of a similar character.

To further encourage woodlot development, the following plan has been adopted by the Conservation Commission.

On request to the commission by the owner of a tract of land, who also agrees to bear the expenses of travel and maintenance of the examiner, a thorough examination of the property is made by an expert forester. The results of this examination are set forth in a practical working plan report. This plan embraces a practical system for the cutting and marketing of small tracts of timber such as farm woodlots, or in case of bare areas or one in need of planting, the report includes a practical planting plan, or where a combination of conditions exists, a combination of both cutting and planting plan is considered. The ideas and desires of the owner of the property examined are always taken into consideration in the preparation of the report. In order to reduce the cost of such examinations to the individual, the requests to the Commission from one part of the State are gathered together, and at a definite time an examiner is sent to complete all examinations in that region. In this way the work is made more systematic for the Commission, and less expensive to the property owner.

In conjunction with this plan of land examination the commission is growing forest trees on a large scale, which will be sold to land owners in the state at the approximate cost of raising them. It is hoped that through the circulation of the instructive pamphlets on woodlot conditions and management, coupled with lectures and personal contact with the owners of woodlots, that a greater interest will be aroused in their favor and that the yield of the woodlots of the state will be materially increased.

APPENDIX

TO

REPORT OF FORESTRY DIVISION.

FOREST FIRE PLAN

FOREST FIRE PLAN

FOR PROTECTION OF HEADWATERS

 \mathbf{or}

WISCONSIN AND CHIPPEWA RIVERS

AS DEVELOPED BY THE WISCONSIN CONSERVATION COMMISSION

IN COOPERATION WITH THE
FEDERAL GOVERNMENT, CORPORATIONS,
AND INDIVIDUALS

. Digitized by Google

OUTLINE PLAN.

1. ORGANIZATION

Protected area

Coöperation

Diagram protective force Permanent force

Head ranger, duties and responsibilities District ranger, duties and responsibilities

Forest Assistants

Permanent workmen

Temporary force Federal patrolmen

Workmen

Emergency force

Local residents

Payment of outside fire fighters

2. PREVENTION

Cleaning up slashings and fire traps Posting of fire notices and warnings Guidance of tourists Press items and magazine articles Personal appeals

Apprehension of individuals who set fires Improvement of spark arresting devices Record of fires

3. DETECTION

Lookout towers

Equipment

Triangulation system for locating fires

Instructions to tower men

Patrol during dry seasons
Instructions to patrol men
Hydro-aeroplane observation

Communication

Telephone lines

Inspection

Portable phones

4. CONTROL

Fire lines

Roads and trails

Tool boxes

Location

Equipment

Transportation Auto trucks

Velocipedes

5. COST OF PROTECTION

- 6. SUMMARY OF IMPROVEMENTS AND EQUIPMENT
- 7. DISTRIBUTION OF PROTECTIVE FORCE

ORGANIZATION.

The problem of fire protection is to organize a force of men sufficiently trained and active to prevent the destruction by fire of property within their respective districts. There will always be some fires, the number depending upon the dryness of the season, the number of tourists within the protected area, etc., and therefore the effectiveness of the protective force in fire prevention will vary with the season. Fire protection is necessary from April 1 to December 1, which is considered the fire season. All other activities are subordinate during that period. Careful attention is given to weather conditions, so that during a dry time the various districts can be more carefully patrolled and protected.

Protected area.

The area considered in this plan includes about 74 townships. It is the duty of the protective force not only to protect all tangible property, whether public or private, but also as far as possible, the natural beauty of the region from all destructive agencies.

Within this area the state is aided in protective work during the fire season by:

- 1. Federal cooperation.
 - 9 forest fire patrolmen
- 2. C. & N. W. railroad.
 - 1 or 2 forest fire patrolmen.
- 3. C. H. Ferry estate.
 - 1 forest fire patrolman.
- 4. Lumber companies within the region.
- 5. Indian service.

A lookout tower has been erected on the reservation and it is hoped that the officials will enter into active coöperation with the state during the season of 1916.

The patrolmen mentioned above work under the supervision of the Conservation Commission, and receive their pay through the Commission.

The following companies, which own large tracts of land within the fire protective area, are carrying on lumbering operations, and have walking bosses, foremen and other employes going over their timberlands:

Forster-Mueller Lumber Co., Hackley-Phelps-Bonnell Lumber Co., Brooks & Ross Lumber Co., A. H. Stange Lumber Co., Turtle Lake Lumber Co., Vilas County Lumber Co., Hiles, Wis. Phelps, Wis. Schofield, Wis. Merrill, Wis. Winchester, Wis. Winegar, Wis.

The state does not assign any patrolmen to service on these lands. However, the patrolmen of the areas adjoining the lands owned by these companies are instructed to watch them for fires and should any occur to take steps to fight them. These companies have authorized the head ranger to call out any of their employes at any time to help in fighting fires, the expense of such work to be borne by the lumber companies.

Diagram of administrative organization:

STATE CONSERVATION COMMISSION.

JAMES NEVIN. W. E. BARBER, F. B. MOODY.

Fisheries JAMES NEVIN Game W. E. BARBER

Forestry F. B. MOODY

Reforestation Education (C. L. HARRINGTON)

Fire Protection (E. M. WEAVER)

Permanent force Rangers (10) Forest Assistant (1)

Temporary force Federal patrolmen (9) Workmen and laborers Permanent workman (1) (5 to 50)

Emergency force People of the surrounding region: Settlers, Woodsmen Summer resort owners and employes (300 to 500 men)

Permanent force.

The protective force consists, first, of rangers, forest assistants, patrolmen and laborers employed by the forestry branch of the Conservation Commission within the protected area and, second, of the hired fire fighters and the surrounding population. The latter are of service in the prevention and detection of fires, but are called upon to fight fires only in times of emergency. The protective force is under the direct charge of the head ranger in all matters relating to protection, while each district is supervised by a ranger.

The protected area is subdivided into 17 ranger or patrol districts, varying in size from 60,000 to 138,000 acres. The average number of acres per district is 95.900.

The head ranger is field superintendent of all districts. responsible to the commissioner in charge of forestry activities for the efficiency of the field work in all districts. His duties require him to outline all work that is carried on in each district, especially work to improve the protective system; to make frequent inspections of all work being carried on, of all equipment and of lines of communication; to hire workmen; to look after trespass cases and sales of forest products, and to supervise all other administrative and protective work over the entire area.

In his district the ranger has complete charge of all protective work, and is held responsible to the head ranger for the efficiency of the fire fighting force under him. He must keep posted on general affairs within his district that have any bearing on the fire situation; he must see that the fire fighting apparatus is in shape for service; he must oversee all improvement work such as road building, fire line and trail construction, telephone line maintenance and inspection. He is responsible for the care of all state property within his district.

The forest assistants and permanent workmen are also a part of the permanent protective force: The former have charge of raising the planting material, of the reforestation work on state and private lands and of all work that requires technical training; the latter are employed irregularly throughout the entire year to help with any of the various undertakings. These men are always ready to go on the fire line when occasion demands. They are for the most part trained fire fighters and are generally well acquainted with the region.

Temporary force.

Under the Weeks law the National government coöperates with the state in forest fire protection on the headwaters of the Wisconsin and Chippewa rivers. In 1915 a fund of \$4,500 was obtained from which 8 patrolmen were kept in service during the fire season (April 1 to December 1). They, with the general laborers, constitute the temporary fire fighting force. They are all men experienced in fighting fires, and during dry seasons are either on lookout or patrol duty. During times of little danger, as after heavy rains, they help in the maintenance and construction of roads, trails and telephone lines. At the beginning of the fire season each federal patrolmen is assigned a definite area to patrol. His route is outlined, and he is expected to comply with all provisions in the set of instructions furnished him.

Emergency force.

The emergency force consists of the inhabitants of the protected area. Under ordinary circumstances these men act as a detection and prevention force in that they report fires that occur without making any attempt to put them out, and through their care and warnings to those inclined to be shiftless with camp fires, brush fires, etc., many fires are prevented. These people are largely settlers, resort owners, guides and woodsmen. In times of emergency, when great fires are burning, the presence of these people permits the rapid expansion of the fire fighting force, as each ranger and federal patrolman, having previously been appointed fire warden by the town chairman in which his district is located, is empowered to call out all able-bodied men to fight forest fires.

The rangers have a thorough knowledge of the available emergency fire fighting force. The emergency force is composed of several hundred able-bodied men, and is of great importance during very dry seasons when the fire risk is exceptionally great.

Payment of outside fire fighters.

All men called out to fight fires by a ranger or patrolman who is acting under his authority as fire warden, are paid one-half by the county in which the fire occurs and one-half by the state. The law further provides:

"No payment shall be made to any claimant under this section until he shall have presented an itemized account, and made oath or affirmation that said account is just and correct, which account shall be approved by the county board, and audited by the county clerk. The county clerk shall thereupon issue to such claimant his warrant upon the county treasurer for the sum to which such claimant is entitled and the county treasurer shall pay the same.



FOREST FIRE PREVENTION PLACARDS DISTRIBUTED BY THE CONSERVATION COMMISSION

"The county clerk shall transmit the original oath and copy of the warrant to the secretary of state, who shall audit such claim, and one-half thereof shall be paid out of the general fund of the state treasury by warrant issued by the secretary of state upon the state treasurer in favor of the county which paid such claimant. However, no county shall expend more than five thousand dollars under this act in any one year."

At the last session of the legislature further provision was made for two years of "a sum sufficient for the protection from forest fires of any lands owned by the state north of town 33." Under this law specific amounts can be obtained from the state treasury for payment of fire fighters upon a written order of the Governor. This law applies to the protection of state lands only.

PREVENTION.

Prevention of fires is essential in a protective system. If the causes of fires can be eliminated, or partially eliminated, and there is every reason to believe they can be, the risks and the cost of protection will decrease accordingly. For the prevention of forest fires the following measures have been adopted on the protected area:

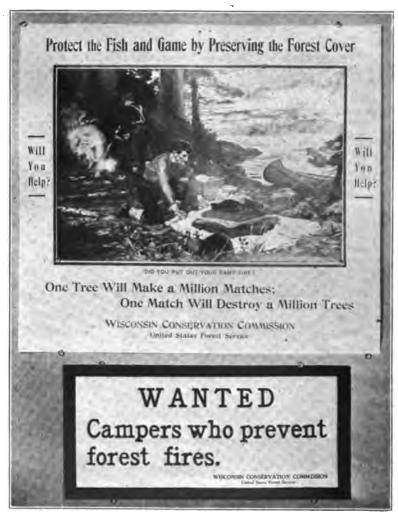
- Cleaning up slashings and fire traps.
 Posting of fire notices and warnings.
 Directing of tourists.
 Printed and personal appeals.
 Apprehension of persons setting fires.
 Improvement of spark arresting devices.
- 7. Record of fires.

Cleaning up slashings and fire traps.

Each ranger and patrolman is expected, during his regular work, to locate and map all slash areas within his district, and at a favorable time, usually in the fall when the frost covers the ground in the morning, to systematically burn these fire traps. The fiercest and most destructive fires are caused by the uncontrolled burning of old slashings, and as long as such areas exist, there will be great danger of fires. The burning of these slashings during a time when fires will not run, and the systematic control of the work greatly reduces the danger. In this manner hundreds of acres of old slash have been cleaned up on the protected area.

Posting of fire notices and warnings.

For the guidance and instruction of all persons within the protected area regarding forest fires, signs and posters are placed at conspicuous places, such as trails, crossroads, railroad stations, camping sites, school houses and summer resorts. These signs are informal and appeal to the reader to aid in preventing fires, or to extinguish them in all cases, because of the destruction or endangering of property or natural resources. Each spring signs of this type are posted, bearing new designs and instructions, in order that the fire danger for that year may be refreshed in the minds of the people of the protected region. These signs and posters are very effective in calling attention to the fire danger, and in constructive education of all who visit the lake region regarding the real status of forest fires.



FOREST FIRE PREVENTION PLACARDS DISTRIBUTED BY THE CONSERVATION COMMISSION

During times of extreme drought special red fire warnings are issued and posted by the town chairmen, prohibiting the setting of all fires except those necessary for warming the person or preparing food. This is a special preventive measure and is resorted to only in times of great danger.

Directing of tourists.

Throughout the protected area many ideal camping sites have been laid out by resort owners, forest rangers, or campers. In most cases these camp sites are equipped with stone fireplaces, tables and benches. The protective force, each season, endeavors to guide all camping parties to such locations, as the starting of fires in definite spots which have been previously arranged for such use, always decreases the danger of such a fire developing into a forest fire. On such camp grounds the combustible material about the fireplace is cleaned up, and the site put in good condition for campers.

Press items, magazine articles.

From time to time articles regarding protective work are issued for the instruction of the people at large. This is a direct effort to train the public to be careful with fires. It results in a decrease of forest fires, and brings home to the public one phase of the conduct expected of them when visiting the great resort region of the state. These articles arouse interest, not only in forest fire protection, but also in other forest activities.

Personal appeals.

The forest ranger or patrolman, whenever occasion permits, is expected to call upon settlers, campers, resort owners, woodsmen and all others within his district to warn them of any particular fire danger, or to instruct them in being more cautious in setting fires. Under ordinary circumstances many fires are prevented in this manner especially on the part of new campers who unintentionally leave their camp fires burning. The rangers or patrolmen often visit camping parties in the more out of the way places and call their attention to the danger of leaving fires in exposed or dangerous places, or, at other times, advise a settler regarding the best time and method of burning brush. This method of prevention can be made very efficient if the rangers and patrolmen are men of tact and good personality, and as a general rule men of these qualities make up the force.

Apprehension of persons setting fires.

Occasionally some malicious person sets a forest fire. In such cases the ranger or patrolman who has charge of the district in which the suspected incendiarism has occurred takes steps to apprehend the offender. A thorough investigation is made and if the evidence collected is deemed sufficient to convict the offender, criminal action is brought against him.

Improvement of spark arresting devices.

One of the most serious causes of forest fires has been the live sparks thrown from locomotives. Of late years the attitude of the large, as well as the small railroad companies, has been radically changed in regard to their responsibility in this respect, and as a result we find that today the companies are very thorough in their inspection of ash pans and front end netting. This change of attitude has been brought about largely

by an inspector, which the commission was authorized by law to employ. The law now provides that all locomotives on main lines must be equipped with efficient spark arresters, and that locomotives on branch lines or spurs in the protected region must have screens over the smoke stacks, so as to prevent the escape of sparks. These measures have resulted in a very material reduction in the number of fires which annually were attributed to this cause.

Record of fires.

Each ranger is required to keep a record of all fires which occur within his district. The date of each fire, location, area burned over, when and by whom reported, and all other points of information bearing upon the fire are recorded.

DETECTION.

Lookout towers.

Four main and four auxiliary lookout towers are maintained within the protective area as follows:

Muscalunge Lake Tower. Tomahawk. Rest Lake Tower. Oxley Lake Tower.	55 ft. 55 ft. 55 ft.	Approximate Area of View. 100 sq. mi. 144 sq. mi. 64 sq. mi. 64 sq. mi.
Auxiliary towers		Approximate
	Height	Area of view
1. Camp No. 2 Lookout	Height 40	Area of view 36 sq. mi.
1. Camp No. 2 Lookout		Area of view 36 sq. mi. 36 sq. mi.
	40 20 20	36 sq. mi.

The five towers first named are of steel construction, each 55 feet high and each set upon prominent hills so that they command a complete view of the surrounding country; the auxiliary towers are tall poles also set on prominent hills. Into each auxiliary tower iron steps have been screwed, which permits of easy climbing, and thus a patrolman can obtain a good view of the surrounding country. These towers are of primary importance in the detection of forest fires.

Each tower is equipped with:

1. A mounted and oriented field map, with protractor.

2. One alidade.

- 3. One pair of field glasses.
- 4. One wall telephone instrument.

5. One portable telephone.

- 6. One shovel and canvas pail.
- 7. One set of telephone repair tools.

The field glasses enable the observer to obtain a clearer view of the surrounding country. Should a fire be discovered, the observer immediately notifies both headquarters and the nearest ranger, giving the bearing of the fire from the tower, and its general appearance. Although the lookout observer is distinctly a detector of fires, there are times when a fire may occur close to the tower, and it is then his duty to go to the fire and commence an attack, and stay until relieved by the ranger or patrolman who comes to fight the fire with the necessary help.

As a general rule a fire is visible from more than one tower, and thus two bearings are reported to headquarters. From these two angles the exact location of the fire can be determined. This is known as the triangulation method of location.

Each tower is located on a map at headquarters which corresponds with the fire map on each tower, and strings are used to mark off the bearings. as reported by the towerman, on a circle graduated to degrees. intersection of these strings gives the location of the fire, thus enabling the ranger or patrolman, with his knowledge of the roads and trails, to get to the fire in the shortest possible time.

The following instructions apply to each tower man:

"Continuous observation between the hours 7:00 a.m. and 6:00 p.m. is absolutely necessary during such weather as requires lookout duty, and all watchmen are required to be at their stations between the above mentioned hours.

"As soon as a fire is located call headquarters and get in communication with the ranger nearest the fire. If the fire is outside the district of any ranger, then call any person having a telephone within the fire zone and request him to get to the fire as soon as possible, and to notify the nearest

fire warden or ranger.
"Every effort should be made to obtain the cooperation of settlers, resort owners, and other persons who can be helpful in the territory covered by the lookout.

"Each morning before leaving the ranger station call headquarters camp to see if the line is in good order, and after getting to the tower call headquarters to be sure the line is in good working order, and if the line is out of order repair it immediately.

"You should submit a report on the weekly report blanks to E. M. Weaver, head ranger, Woodruff, Wis. When weather conditions are such that it becomes unnecessary to be on the lookout for fires, you will receive instructions from head ranger Weaver, regarding your further duties.

For the detection of forest fires the lookout tower is very efficient except during cloudy or hazy weather. At such times the area over which a clear view can be obtained is reduced. Even under such circumstances the value of the tower is very great.

Patrol during dry seasons.

During dry seasons the patrolmen are actively engaged in patrolling the area assigned to them by the head ranger at the beginning of the fire season, and according to the instructions with which they are provided. They cover the territory in which the greatest fire danger exists, such as along railroads and near the more popular lakes. Each man is equipped with a shovel, a canvas pail and oftentimes with a portable phone. In the protected area the shovel is the best tool for fighting fires as the soils are light and easily handled. The patrolmen operating along the railroad tracks travel on hand pedes, a permit to operate over the

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The standard equipment of a tool box consists of:

12 shovels; 12 galvanized pails; 6 grub hoes; 6 axes; 6 mattocks, and 6 rakes.

These tools are kept in good repair and are sufficient to equip a fire fighting crew of from 12 to 18 men.

Cutting stubs.

Old dead stubs are dangerous when standing along roadsides or fire lines, since sparks from such a height are carried for long distances. Such old stubs have been cut back for from 6 to 10 rods on each side of over 125 miles of roads and fire lanes. Such work as this is generally carried on during the winter months and is an important step in the control of fires.

Transportation.

Rapid transportation of a fire fighting crew is essential to efficient control of forest fires. In order to accomplish this, an auto truck is stationed at headquarters camp which is held in readiness, especially during times of drought. This truck will accommodate from 6 to 10 men with their equipment. Coupled with a good system of roads and trails, the truck is invaluable in getting to a fire in the shortest possible time. Instances have occurred when a reported fire was reached in from 20 to 30 minutes with the truck, whereas with a team or by foot the time required would be between one and two hours. The advantage gained is readily realized. Not only is the fire fighting crew in good physical trim after reaching the fire and therefore able to do better work, but the fire has had but little time to gain headway, and is, therefore, extinguished with comparative ease. The truck is also very serviceable in reforestation work for the transportation of plant stock, equipment and men, and in general administration.

The C. M. & St. P. Ry., C. & N. W. Ry., and the "Soo" line, in coöperation with the Conservation Commission have granted permits to all rangers, patrolmen and forest assistants, to operate velocipedes over their lines within the protected area. This is a direct advantage in patrol work along railroads, because of the special fire hazard, and also in getting to fires which occur along the rights of way in the shortest time. This privilege aids greatly in the work of detecting and controlling forest fires.

COST OF PROTECTION.

The following figures give the cost for fire protection during	ng 1915:
The state expenditures in 1915 were	
Private expenditures under state supervision were	765.00
Government expenditures	4,498.20
· -	

SUMMARY OF IMPROVEMENTS, EQUIPMENTS AND DISPOSITION OF THE FOREST PROTECTIVE PERSONNEL.

IMPROVEMENTS

Stations:	Location
Headquarters Camp	Sec. 8, T. 41-7 E.
Plum Lake Ranger Station	Sec. 29, T. 41-8 E.
Star Lake Ranger Station	
Tomahawk Lake Ranger Station	Sec. 4, T. 38-7 E.
Carroll Lake Ranger Station	Sec. 4, T. 39-7 E.
Wildcat Lake Ranger Station	Sec. 34, T. 43-7 E.
Oxley Ranger Station	Sec. 24, T. 42-6 E.
Rest Lake Ranger Station	Sec. 4, T. 42-5 E.
Patrol Cabin	Sec. 28, T. 41-7 E.
Patrol Cabin	Sec. 12, T. 42-8 E.
Patrol Cabin	Sec. 14, T. 43-7 E.
Patrol Cabin	Sec. 32, T. 42–4 E.
Lookout Towers.	
Primary Lookouts	Location
Muskellunge Lookout Tower	Sec. 34, T. 41-7 E.
Oxley Lookout Tower	Sec. 23, T. 42-6 E.
Tomahawk Lookout Tower	Sec. 27, T. 39-7 E.
Rest Lake Lookout Tower	Sec. 4, T. 42-5 E.
Flambeau Lookout Tower	Sec. 34, T. 41-5 E.
Auxiliary Lookouts	
Camp No. 2 Lookout	Т. 42–8 Е.
Lookout	Т. 41–3 Е.
Lookout	50 40 0 D
	Т. 40–3 Е.
Lookout	

Roads.

About 250 miles of dirt roads constructed at an average cost of \$131.58 per mile.

Fire lanes.

About 141 miles constructed at an average cost of \$84.67 per mile.

Telephone lines.

Over 80 miles constructed at an average cost of \$35.93 per mile.

Slash burning.

Slash burned on over 1500 acres at an average cost of about \$5 per acre.

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EQUIPMENT.

One auto truck located at headquarters. 10 fire tool boxes. (Standard equipment) Location Mercer Powell Arbor Vitae Star Lake Boulder Jct. Tomahawk Lake Robbins Conover Gagen Sayner Eight portable phones Location Headquarters.... Oxley..... Star Lake..... Plum Lake Woodruff..... Manitowish..... Sayner..... Four lookout kits each consisting of: A mounted and oriented field map. One portable telephone. One alidade. One shovel and canvas pail. One pair of field glasses. One set of telephone repair tools. One wall telephone instrument. Ten Velocipedes located as follows:

Headquarters 4, Woodruff 1, (Gas car); Oxley 1, Sayner 1, Star Lake 1, North Crandon 1, Wildcat Lake 1.

Each station is also equipped with shovels, pails, rakes, mattocks and all other necessary fire fighting tools, besides camping kits, telephone repair tools, tents, maps and all other paraphernalia needed for the protective system.

COMMISSIONERS OF FISHERIES.

FINANCIAL REPORT.

July 1, 1914 to June 30, 1915

OPERATION A	CCOUNT.
-------------	---------

July 1, 1914. June 28, 1915. June 30, 1915. July 1, 1915.	Annual Appropriation Refund H. C. Prange Co Total disbursements. Balance on hand.	\$48,500.00 23.00	\$46,189.54 2,333.46
		\$48,523.00	\$48,523.00
	REPAIRS & MAINTENANC	E.	
July 1, 1914. July 1, 1915.	Appropriation	\$3,250.00	\$3,210.00 40.00
		\$3,250.00	\$3,250.0
	LAND AND IMPROVEMEN	rs.	
July 1, 1914. July 1, 1915.	Appropriation	\$4,910.00	\$4,885.00 25.00
		\$4,910.00	\$4,910.00
M	IISSISSIPPI RIVER FUND. (SEC.	172-22-4)	
Total amount o	collected to June 30, 1915		\$9,485.36 2,434.27
Amount on han	nd July 1, 1915		\$7,051.09
	DMINISTRATION AND OFFICE E	XPENSE.	
Salaries		\$5,410.08	
Printing, posta	nsesge, telephone, office supplies	433.39 906.78	\$6,750.25
	Madison Hatchery.		₩0,700.20
Sundry labor Supplies and eq Fish food	uipmentprovements	\$3,440.00 267.75 1,085.89 969.09 2,161.03	\$ 7,923.76
Bayfield Hatchery.			
Sundry labor Supplies and eq Fish food	uipmentprovements	\$3,322.00 645.35 923.18 886.38 1,225.57	\$7,002.48
Oshkosh Hatchery.			
Salaries and lak Supplies and eq	oruipment	\$371.50 200.81	\$572.31

Minocqua Hatchery.		
Salaries and laborSupplies and equipment	\$1,242.00 920.41	
Delafield Hatchery.		\$2,162.4
•	e1 973 A9	
Salaries and labor	\$1,873.48 187.49	\$2,060.97
Wild Rose Hatchery.		
Salaries	\$2,670.00	
Sundry laborSupplies and equipment	585.71 546.38 796.17	
Fish food	796.17 1,058.70	\$ 5,656,96
Sturgeon Bay Hatchery.		4 0,000, 80
Salariae	\$1,080.00	
Salaries. Supplies and equipment.	1,071.05 1,305.12	
Sheboygan Hatchery.		\$3,456.17
•	\$1,166.34	
Salaries Supplies and equipment Supplies and equipment	1,207.00	
Supplies and equipment	1,195.55	\$3,568.89
Spooner Hatchery.		
Labor, equipment and supplies	\$405.38	\$405.38
Eagle River Hatchery.		•
Completing building	\$666.78	
Labor, supplies and equipment	660.01	\$1,326.79
Transportation and Distribut		
Salaries and labor	\$705.25	
Freight, dray and express	\$705.25 2.270.58 4,565.96	
Supplies and equipment	468.07	\$8,009.86
Miscellaneous.		
Collecting lake trout, bluefin and pike eggs	\$3,474.85 / 131.50	
State Fair Exhibit	527.52	
Overdraft from fiscal year ending June 30, 1914	1,254.44	\$5,388.31
Grand Total		\$54,284.54
Total appropriation	\$56,660.00	
Total appropriation	23.00	\$54,284.54 2,398.46
Unexpended balance	\$56,683.00	\$56,683.00
FINANCIAL STATEMENT FOR YEAR EN	DING JUN	E 30, 1915
(Old Boards and Commission		
Forestry Board		40,629.94 22,733.67
Fish Commission	· · · · · · · · · · · · · · · · · · ·	53,030.10
State Game Warden	·····	135,813.37

^(*) Covers Marquette, Peninsular, Devil's Lake and Interstate parks.

Total.....\$252,207.08

FINANCIAL STATEMENT FOR YEAR ENDING JUNE 30, 1916

(New Conservation Commission)

Forestry Division. State Park Division. Fisheries Division Warden Division.	52,598.67
Total	
(*) The office or administration expense was prorated among the (†) Covers Marquette, Peninsular, Devil's Lake, Interstate and Coparks.	e four divisions. ushing Memorial

CLASSIFIED FINANCIAL STATEMENT.

July 1 1915, to June 30, 1916

GENERAL ADMINISTRATION.

Salaries, commissioners and office force	2,550.47 761.31 5,139.23 1,528.65 369.65 182,62
FORESTRY DIVISION.	
Salaries and sundry labor	7,083.55 1,147.60 1,399.44 199.01 170.99 3,689.99
Total	13,690.58
FORESTRY DIVISION (FIRE PROTECTION). Sundry labor	2,935.84 1,039.89 150.00 419.88
Total\$	4,545.61
STATE PARKS DIVISION. Peninsular Park, (Salaries, labor, supplies)	3,824.24 4,028.44 1,776.65 196.98 342.88 295.00 167.46

WARDEN DIVISION

WARDEN DIVISION.		
Salaries		\$ 57.762.41 4,704.36 16,420.82 5,008.80 2,378.06 2,432.72 2,992.34 131.24 78.55 11.821.79
Total	•	21,021.70
TotalFISHERIES DIVISION Madison Hatchery.		\$ 103,731.09
Salaries and sundry labor	\$3,147.85	
Fish food Equipment	746.76	
Supplies and repairs.	154.00 487.62	
• • • • • • • • • • • • • • • • • • • •		\$4,536.23
Bayfield Hatchery.		
Salaries and sundry labor	696.35 221.77 818.90	
		\$6,984.75
Oshkosh Hatchery.		
Sundry employment	. 110.00 . 138.51	\$2,951.72
Minoqua Hatchery.		
Salaries and sundry labor. Equipment	80.00	\$2,145.36
Delafield Hatchery.		
Salaries and sundry labor	\$2,099.70 102.56	\$2,202.26
Wild Rose Hatchery.		
Salaries and sundry labor	. 819.49 . 152.04 . 321.55	
•		\$4,641.01
Sheboygan Hatchery.		
Salaries and sundry labor. Water rent. Supplies and repairs.	\$2,249.50 606.48 558.08	\$ 3,414.06
Da		
Sturgeon Bay Hatchery. Salaries and sundry labor	504.13 286.19	
Improvements	308.34	

Sub-Hatcheries.	
Spooner, (Labor and supplies)\$297.70)
Regle River (Lehor and supplies) 126.11	
Madison, (Erecting and equipping)	\$1,154.00
	- \$1,154.00
Distribution of Fish.	
Salaries and sundry employment\$791.00) •
Employees' expenses	
Supplies	
-, -	\$6,679.23
Miscellaneous Disbursements.	
Collecting fish at Neenah Dam	
Collecting lake trout eggs	
State Insurance 520 32	2
July, 1915, disbursements under old Dept	•0 000 20
· · · · · · · · · · · · · · · · · · ·	\$8,098.39
Grand Total Fisheries Division	
Grand Total, all Departments	\$206,349.73
Recapitulation.	
	\$100 Q07 50
Per diem	17.069.27
SalariesPer diem	2,680.72
Equipment	4,467.15
Printing	5,139,23
Postage	1,529.65
Telephone and telegraph Employees' traveling expenses	41,805.47
Dray, freight, express	1,872.04
State Insurance	867.77
Property and Improvements	3,996.40 4,987.30
Grand Total	
General operation	
Repairs and Maintenance	4,987.30
Property and Improvements	3,996.40
Grand Total	\$206,349.73
Appropriation for Operation (172-42-1)\$200,000.00	
Repairs and Maintenance (172–42–2)	
Repairs and Maintenance (172-42-2) 5,000.00 Property and Improvements (172-42-3) 4,000.00	
Total disbursements. Unexpended balance on hand July 1, 1916	\$206,349.73 2,650.27
\$209,000.00	\$209,000.00
Administration and Office expenses	\$ 28,202.13
Warden Division	103,731.09
Porestry Division	4,545.61
State Parks Division	10,631.65
Fisheries Division	45,548.67

Statement of Salaried Employees.

Commissioners and office force	9
Commissioners and office force	63
Parks Division Fisheries Division	4
Fisheries Division	17
Forestry Division	10
Short period employees in the parks, forestry and fisheries divisions, hired as extra help when necessary	
	_
Regular and extra men employed during fiscal year	333

144 Wisconsin Conservation Commission

FOREST RESERVE FUND.	
Balance July 1, 1915	
Expenditures	\$ 79.70 24,105.69
\$24,185.39	\$24,185.39
GOVERNMENT REFORESTATION FUND.	
Balance July 1, 1915	
ExpendituresBalance, July 1, 1916	\$ 3,685.21 9,747.08
\$13,432.29	\$13,432.29
PARK PURCHASE FUND.	
Balance, July 1, 1915 \$10,825.34 Receipts for year 1,870.12	
Balance available	\$12,695.46
\$12,695.46	\$12,695.46
GLENN PARK FUND.	
Balance on hand	\$5,999.84 1,181.74
Balance on hand July 1, 1916	\$ 4,818.10
DEVIL'S LAKE PARK FUND.	
Balance on hand	\$ 45.66 38.70
Balance on hand July 1, 1916	\$ 6.96
PENINSULAR PARK FUND.	
Balance on hand	
FOREST FIRE PROTECTION.	,
(Cooperative Disbursements)	

Paid by U. S. Government under Weeks Law. \$3,813.00
Paid by Mansfield Ferry, New York City. \$370.00

WISCONSIN CONSERVATION COMMISSION CLASSIFICATION OF RECEIPTS.

July 1, 1915, to June 30, 1916

Nonresident Anglers' Licenses	\$23,215.83
Lake Michigan, Superior & Green Bay licenses	4,208.00
Lake Pepin, St. Croix & Mississippi River Licenses	2,811.75
Rough Fish (Winnebago County waters)	2,578.36
Rough Fish (other waters)	9,632.11
Resident Hunting licenses	133,578.50
Nonresident Hunting licenses	11,670.00
Duplicate licenses	106.50
Settlers' licenses	632.00
Confiscations	2,730.48
Wardens' fees	554.75
Fines imposed (credited to School Fund)	16,969.50
Set Line licenses	1,728.70
Game Farmers' licenses and registration fees	1,092.39
Concessions from park lands	1,870.12
Island leases and nursery stock sales	737 .47
Ground leases, timber sales, trespass, etc	13,144.94
Total	\$227,261.40

INVENTORY.

FISHERIES DIVISION.

Madison Hatchery 63 acres of land, 7 buildings, 17 ponds, 1350 feet of raceway Tools and equipment	\$35,000.00
Tools and equipment	4,000.00
Bayfield Hatchery 502 acres of land, 6 buildings, 26 ponds, 1500 feet of raceway, 6700 feet of pipe line	45,000.00 5,000.00
Oshkosh Hatchery One city lot, hatchery building, boathouse and dock Tools and equipment	7,000.00 2,500.00
Minocqua Hatchery 275½ acres of land, 5 buildings, 7 ponds, 2200 feet of pipe line	25,000.00 2,500.00
Delafield Hatchery 30 acres of land, hatchery building, 6 ponds, 1490 feet of pipe line Tools and equipment	27,000.00 1,500.00

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Wild Rose Hatchery 591 acres of land, 5 buildings, 32 ponds, 1035 feet of pipe	
line	\$25,000.00
line	1,500.00
Sturgeon Bay Hatchery	
2 city lots, hatchery building	10,000.00
Tools and equipment	1,000.00
Sheboygan Hatchery	
City lot and hatchery building	10,000.00
Tools and equipment	1,000.00
Spooner Hatchery	
City lot and building	1,500.00
City lot and building Tools and equipment	700.00
Eagle River Hatchery	
City lot and building	1,500.00
Tools and equipment	700 .00
Tenney Park Hatchery	
Building	500.00
Building State Fish Car "Badger No. 2"	13,500.00
Car shed at Wild Rose	1,500.00
Total	\$222,900.00

INVENTORY.

Warden Division			
25 motorcycles	••••••••	\$5,000	.00
Launch "Beda"	•••••••••••••••••••••••••••••••••••••••	1,000	
Launch "Anna S"	••••••	750	
Launch "Kingfishe	r''	1,000	.00
Launch "Wisconsi	a"	100	
Launch "Submarin	ie"	150	
Launch "Galatea"		1,500	
12 detachable boat	motors	780	
		350	
Automobile	······································	1,500	
3 Ford trucks		1,000	
5 Polu ducks	·······	1,000	
Total		\$13,130	.00
State Parks Divisio	n		
Devil's Lake park-	-Buildings	\$20,350	.00
	1040 acres of land	128,497	
Peninsula Park	Buildings and two lookout towers	17,255	
	3190 acres of land	96,182	
Marquette Park	Buildings	1,160	
	1651 acres of land	46,139	
Interstate Park	Buildings	400	
Intoductor I talk	580 acres of land	20,571	
Cushing Memorial	Park 8 acres of land	5,000	
3	•		
Actual cost to stat	e	\$335,554	00.

Forestry Division	
37 buildings	\$28,690.00
4 steel lookout towers	550 .00
86 miles telephone line	3,150.00
86 miles telephone line Trout Lake Nursery (land improvements, water system,	
equipment)	4,700.00
Tomahawk Lake Nursery (land improvements, water	
system, equipment)	2,600.00
Nursery Stock (Trout Lake)	9,385.00
Nursery Stock (Tomahawk Lake)	1,985.00
Implements, tools and equipment	4,100.00
1000 acres of forest plantations	6,000.00
Total	\$61,160.00
	•
Recapitulation of Inventory.	
Fisheries Division	\$222,400.00
Warden Division	
State Parks Division.	335,554.00
Forestry Division (lands not included)	61,160.00
Grand Total	\$ 632,744.00
Lands Under Direct Control. (Acreage)	
Fish hatcheries.	900
State Parks	6.469
Forest county game refuge	
State Game Farm	
Brule Forest Reserve	
U. S. Forest Reserve grant	
State Forestry lands	341,228
U. S. Grant Islands (637)	875
Indian Reservation Lands (claimed by state)	47,000
Total acreage	457,200

CLASSIFICATION OF CONFISCATIONS.

July 1, 1915, to June 30, 1916.

cizures of:	
Doe carcasses	••••••••••
Venison in clo	sed season
Venison with	out coupon attached
Of live deer	closed season
More than las	vful amount of venison
	deer
Dogs running	hides
Small come u	nlowfully in possession
Small game u	nlawfully in possession transportation
Sman Same n	
Beaver hides.	
Otter hides	
Illegal furs	

148 Wisconsin Conservation Commission

Ducks unlawfully in possession Fish in closed season	
Fish illegally transported	•••••••
Fish illegally caught Fish, undersized	•••••••••••••••••••••••••••••••••••••••
Fish, undersized	••••••
Illegal nets	•••••••••••
Fish, unlawfully labelled	
Set lines, illegal	••••••
Snag lines	
Boats	
Guns	
Traps	
Spears	
Fishing rods or creels	
Duck decovs	
Rabbits and ferrets	
Pelicans	
Total number of seizures	

AMOUNT OF FINES AND COSTS IMPOSED ACCORDING TO COUNTIES, FROM JULY 1, 1915, TO JULY 1, 1916.

			,		
	Fines.	Costs.	1	Fines.	Costs.
Adams	\$ 100.00	\$ 9.76	Marquette	\$ 75.00	\$ 8.82
Ashland	205.00	31.21	Milwaukee		15.52
Barron	630.00	118.20	Monroe		10.02
Bayfield	320.00	61.05	Oconto	120.00	55.79
Brown	415.00	199.87	Oneida	297.50	63.57
Buffalo	50.00	10.45	Outagamie		52.68
Burnett	30.00		Pierce		3:10
Chippewa	190.00	43.65	Pepin	25.00	.75
Clark	100.00	10.12	Polk	1.125.00	158.83
Columbia	150.00	19.74	Portage		21.22
Crawford	125.00	10.80	Price		14.52
Dane	415.00	19.95	Racine		22.86
Dodge	555.00	103.14	Richland		37.47
Door	75.00	12.34	Rock		29.78
Douglas	585.00	49.78	Rusk		28.70
Dunn	10.00	2.35	St. Croix	25.00	2.30
Eau Claire	1.390.00	92.55	Sauk		46.94
Florence	200.00	49.10	Sawyer		26.77
Fond du Lac	265.00	108.77	Shawano		10.35
Forest	125.00	36.14	Sheboygan		49.15
Grant	75.00	7.50	Taylor		9.29
Green	120.00	19.31	Trempcaleau		7.56
Green Lake		5.60	Vernon		6.89
Iowa	95.00	13.03	Vilas	400.00	53.55
Iron	135.00	20.70	Walworth	310.00	45.36
Jackson	25.00	2.18	Washburn		56.62
Jefferson	200.00	45.69	Washington	420.00	102.27
Juneau	370.00	129.50	Waukesha		145.89
Kenosha	110.00	89.04	Waupaca		160.93
Kewaunce	100.00	6.28	Waushara		39.99
La Crosse	50.00	7.05	Winnebago		76.62
Lafayette	245.00	34.35	Wood		23.08
Langlade	100.00	8.00			
Lincoln	495.00	104.10	Total	\$16,969.50	\$3,538.65
Manitowoc	150.00	17.64	!		•
Marathon	285.00	86.30	Total amount of	warden's fe	es
Marinette	1,135.00	576.24	collected		\$554.75

ITEMIZED STATEMENT OF ARRESTS FROM JULY 1, 1915, TO JULY 1, 1916.

Transferring license	
Resident hunting without license	
Nonresident hunting without license	
Hunting or killing deer in closed season	44
Killing or having doe in possession	20
Venison in possession in closed season	38

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Buying or selling venison	. 14
Killing more than one deer	4
Hunting deer with dogs or having dogs in camp	- 11
Serving venison in camp or to borders,	. 4
Dynamiting fish. Unlawful method of fishing	. 33
Uniawing fish team	102
Using fish trap. Catching and retaining undersized fish. Selling, catching or having game fish in possession in closed season	28
Calling entehing or hound some fish in possession in closed season	38
Catching on having game as in possession in closed season	20
Catching game fish with dip net. Shipping more than 20 lbs. of fish in 7 days. Shipping more than 25 lbs. bullheads.	23
Shipping more than 25 lbs. bullheads	3 3 13
lilegal transportation of tish	13
Using snag lines. Unlawful fishing within 200 feet of dam.	7
Unlawful fishing within 200 feet of dam.	3
Unlawful use of nets or seines	102
Unlawful use of set lines	26
Fishing without license, outlying waters. Fishing with lines unattended.	1
Fishing with lines unattended	. 6
Unlawful transportation of small game	4
Unlawful transportation of small game Hunting or killing game birds in closed season	32
Killing more than fifteen ducks	4
Shooting ducks from motor boat	. 5
Shooting ducks in open water	33
Shooting ducks at night Buying and selling game birds. Killing harmless birds or disturbing nests.	44
Buying and selling game birds.	26
Killing rabbits or squirrels in closed season	11
Hunting rabbits with ferret	iö
Trapping in closed season.	38
Trapping without license.	2
Trapping beaver	
Possessing otter	Ĭ
Possessing otter	11
Molesting muskrat houses or trapping therein	23
Proceeding green fure in closed senson	- 93
Killing raccoon in closed season Interfering with conservation warden False labelling of shipments. Depositing deleterious substance in streams Obtaining bounty by fraud. Issuing false certificates for bounty. Running Dogs in closed season for birds.	6
Interfering with conservation warden	1
False labelling of shipments	2
Depositing deleterious substance in streams	4
Obtaining bounty by fraud	7 11
Issuing talse certificates for bounty	17
Running Dogs in closed season for Dirds.	12 12
Setting poison without posting notice Having venison without coupon attached	2
Traving venison without coupon attached.	
Total	883
Fine sentences imposed	594
Jail sentences imposed	. 52
Jail sentences imposed. Both fine and jail sentences imposed	5
Cases pending	37
Cases dismissed	41
Acquittels	31 77
Fine suspended on payments of costs	30
Both fine and costs suspended	. 30
Placed on probation	

STATEMENT OF ARRESTS AND SEIZURES BY, WARDENS.

Arrests	Seizures	Warden	Address ,
8 12 5 26 1	1 2 8 13	Berg, M. E	Rhinelander, Wis. Madison Sturgeon Bay Oshkosh Tomah
8		Bosworth, E. F	Merrill
10	1	Buell, V. C	Appleton
11	5	Brunet, A. R	Fond du Lac
5	3	Childs, A. S	Ashland
16	18	Cranston, D. M	Green Bay
6	1	Cole, W. A	Vesper.
5	3		Viroqua.
12	5		Spooner.
10	3		Milwaukee, 491 Superior.
32	17		Gillett.
11	4	Fosnot, John B	Tomahawk.
16	2	Foster, John W.	Wausau.
10	4	Gautsch, E. W.	La Crosse.
23	8	Grey, W. T.	Rice Lake.
18	8	Gruebner, H. C.	Sheboygan.
14 20 4 6 8	8 . 3 4 8 4	Hall, AHall, George FHolmes, A. AHope, AndrewHull, G. F	Darlington. Rubicon. Trempealeau. Hammond. Wittenberg.
7	2	Jakoubek, K. C.	Phillips. Bagley. Stevens Point. Princeton. Oshkosh and Green Bay.
7	2	Keeler, J. G.	
18	2	Kelsey, J. V.	
12	2	Keys, W. A.	
15	9	Kleist, Mike.	
15 30 10 1 22	10 4 2 2 2 4	Lanning, B. P. Lee, Albert Long, John Little, C. S. Mason, W. P.	Black River Falls.
12	7	McNaughton, Jas.	Superior.
15	5	Miller, G. A.	Boscobel.
•12	5	Nolan, R. B.	Sextonville.
•21	6	Oberholtzer, H. J.	Eagle River.
7	6	Powell, A. W.	Bayfield.
9	5	Pooler, W. D	Superior.
15	1	Pugh, John	Racine.
9	2	Randall, F. D	Waupaca.
10	76	Raeth, Val	Milwaukee, 1178 Humboldt.
5	7	Richtman, S. P	Fountain City.
6	1	Russell, A. G	Wabeno.
7	8		Park Falls.
24	5		Stoughton.
62	20		Marinette.
14	3		Ladysmith.
11	13	Stahl, Geo	Green Bay, Box 208. Menomonie. Wausau. Thorp. Oconomowoc.
3	2	Swant, M. F	
17	3	Thorn, M. C	
14	8	Tiedeman, H. C	
28	7	Tuttle, E. W	
9 11 22 5 3	4 1 2 7	Wismer, W. W. Worden, John D. Fess, Edw. Cadrant, J. J. Gwidt, Steve	Drummond. Plainfield. Madison, 4 months. Green Bay, 3 months. Marinette, 3 months.
4 '	2	Jeske, Louis	Madison, 2 months.

DISTRIBUTION OF FISH.

SUMMARY OF OUTPUT OF HATCHERIES, 1915.

Madison Hatchery:	Delafield Hatchery:
Brook trout, advanced fry 1, 207, 800	Wall-eyed pike fry
Rainbow trout, advanced fry 2, 046, 800	Black bess, fingerling 168,000
Rainbow trout, yearling	
Brook trout, adult	36, 378, 000
Rainbow trout, adult. 2, 150	
Furnished trout for State Fair Exhibit. 300	Wild Rose Hatchery:
	Brook trout, advanced fry 1, 675, 000
3, 262, 650	Rainbow trout, advanced fry 1, 909, 200
	Rainbow trout, yearling
· -	
Bayfield Hatchery:	3, 592, 400
Brook trout, advanced fry	
Drive trous, advanced by	Sturgeen Bay Hatchery
Rainbow trout, advanced fry 830, 000	Sturgeen Bay Hatchery: Lake trout fry
Brook trout, fingerling 63, 200	Whitefish fry 4, 400, 000
Rainbow trout, fingerling	** Michael M.J
Lake trout fry13, 977, 500	21,746,000
Bluefin fry	21,780,000
Brook trout eggs 50,000	Shehevgan Hatchery:
Brook trout, fingerling sent to Madison	Lake trout fry
and Wild Rose Hatcheries 15,500	Dl6 6 000 000
Brook trout, adult	Bluefin fry
Rainbow trout, adult	LAKE TOUT, CYCL CEES
Furnished trout for fairs and aquariums 250	94 511 990
	24,511,220
35, 47 4, 3 02	·
	Speener Hatchery: Wall-eyed pike fry18, 904, 000
	waii-eyed pike iry18, 901, 000
Oshkosh Hatchery:	
Wall-eyed pike fry18, 000, 000	Eagle River Hatchery:
Wall-eyed pike eggs at the point of	Wall-eyed pike fry28, 350, 000
hatching	
200,000	Mississippi River:
30, 600, 000	Croppies and Sunfish, fingerling
30, 000, 000	Pike and Bass, fingerling
	Pickerel, fingerling
	Rough fish, fingerling
Minocena Hatchery:	
Wall-syed pike fry41, 078, 000	51,300
Black bees fry 50,000	l ———
Pickerel fry 300,000	Neenah:
Muskellungs fry 600, 000	Perch, fingerling 81,360
Bullheads, adult	Lake trout eggs impregnated 1,176,500
·	State Fair Exhibit
42, 028, 145	
	Total246, 156, 407

DISTRIBUTION OF FISH.

RECAPITULATION OF FISH DISTRIBUTED, 1915.

Brook trout, advanced fry	5,990,600 63,200 4,786,000
Brook Trout fingerling	63,200
Uninham trant advanced for	4.786 .000
Rainbow trout, fingerling Wall-eyed pike fry Black bass fry	146.700
Wall and sile for	142 532 000
Wan-eyed pike Iry	142,552,000
Black bass fry	50,000 178,000
Black bass, fingerling	
Muskellunge fry	
Pickerel fry	300.000
Lake trout fry	45.834.720
Lake trout, impregnated eggs	1 176 500
Whitefish fry	4 .400 .000
Bluefin fry	27 180 000
Perch, fingerling	
Miscellaneous	12,785,827
Miscialite de la constant de la cons	
Mississippi river, miscellaneous	31,500
	246,156,407

SUMMARY OF OUTPUT OF HATCHERIES, 1916.

Madison Hatchery:	
Brook trout, advanced fry	1, 172, 000
Rainbow trout, advanced fry	1, 563, 600
Brook trout, adult	2,000
Brook trout, adult	2, 40
I di monos tante and aquartumo	
	2,737,640
D. C.1111	
Bayfield Hatchery:	
Brook trout, advanced fry	2, 986, 200
Rainbow trout, advanced fry	. 628,800
Lake trout fry	10, 686, 000
Rainbow trout, adult	1,034
Furnished fairs and aquariums	320
	14, 302, 354
0.11 1.17 . 1	
Oshkosh Hatchery:	
Wall-eyed pike fry	1,350,000
Minocqua Hatchery:	
Wall-eyed pike fry	06 404 000
Black bass fry	
Pickerel fry	900,000
Muskellunge fry	800,000
	28, 520, 000
Delafield Hatchery:	
Delaneid Hatchery:	
Wall-eyed pike fry	28, 550, 000
Black bass, fingerling	. 448,000
Black bass, yearling	8, 247
Roach, fingerling	5, 100 312
Roach, fingerling	312
	29, 011, 659

Wild Rese Hatchery: *Brook trout, advanced fry	. 1.861.800
	1,961,812
Sturgeen Bay Hatchery: Lake trout fry	12, 180, 000
Sheboygan Hatchery: Lake trout fry. Whitefish fry. Chub fry. Bluefin fry.	4,074,070 18,480,000
Speener Hatchery: Wall-eyed pike fry	43, 688, 150 17, 438, 400
Eagle River Hatchery: Wall-eyed pike fry	28, 800, 000
Tenney Park Hatchery: Wall-eyed pike fry	
Neenah: Whitebass and Perch, fingerling Weyauwega: Pickerel, fingerling Hayward: Croppies fingerling State Fair Exhibit	3,000 1,150
Total2	06, 308, 485

RECAPITULATION OF FISH DISTRIBUTED, 1916.

Brook trout, advanced fry	4,258,200 4,054,200
·Wall-eyed pike fry	128,782,400
Black Bass fry	416,000
Black bass, fingerling	448.000
Black bass, yearling	8,247
Muskellunge fry	800,000
Pickerel fry	900,000
Lake Trout fry	38,908,080
Whitefish fry	
Chub fry	
Bluefin fry	5 092 000
Whitebass and Perch, fingerling.	73,990
Pickerel, fingerling	3,000
Croppies, fingerling	1,150
Boach, fingerling	
Roach, fingerling Miscellaneous	4,048
· ·	206,308,485

^{*2,000,000} eyed brook trout eggs sent to Bayfield.

DISTRIBUTION BY COUNTIES

1915.

County.	Brook Trout Advanced Fry	Rainbow Trout Advanced Fry	Brook Trout Fingerling	Rainbow Trout Fingerling	Wall-eyed Pike Fry	Black Bass Fry	Black Bass Fingerling	Perch Finger- ling.
Adams	10,800	23,800						
Ashland Berron	118,800 93,600	209,000 88,400	2,100	12,400	1,936,000			
Bayfield	577,000	398,000	5,570	5,600 22,800	1,902,000 4,428,000			· · · · · · · · · · · · · · · · · · ·
Brown	73,800	37,200	0,010	22,000	1,120,000			
Buffalo						,		
Surnett	3,600	4,800			2,000,000			
alumet	91,800	8,400 84,200	600		950,000			····· <i>·•</i> ··· ··
lark	10,800	41,400	2,100		492,000			
Columbia	93,600	72,800			3,266,000	1		4.800
rawford	48,600	11,200						1,000
)ane	135,000	112,000			6,436,000		5,000	960
Oodge Door	7,200 23,400	4,200 21,600			1,400,000			4,520
Dozerina	147,600	92,800	2,700	19.800	1,240,000	6,000		
Dunn	140,400	61,600	2,700	1,600	740,000	0,000		
Sau Claire	82,800	49,000		1,000	140,000			960
lorence	57,600	51,800			570,000			
Fond du Lac	37,800	10,800			646,000		5,000	3,160
Corest	171,000	76,000		4,800	1,796,000	6,000		840
rant	70,200 64,800	39,200 36,400		1,200	904 000			
ireen Lake	25,200	4,200			204,000 450,000			350
OWA	77,400	30,800			100,000	6,000		
rom	120,600	35,200			1,368,000			
ackson		132,000	17,100	11,000	476,000			1,920
efferson	19,800 73,800	9,800 33,600	450		2,834,000		6,000	5,160
Cenceha	10,000	33,000			1,250,000		11,000	2,160
Cevannee	39,600	59,400				Ì		'
A Crosse	39,600		4,200		1,200,000			
a Payette	18,800	4,200		,			6,000	490
anglade incola	28,800	30,000		4,800	1,786,000	2,000		
	115,200	25,200			2,812,000			
famitowoc	54,000	104,400			1,064,000			420
Carathon Carinette	145,800 286,200	145,800 260,400	2,400	4 800	1,216,000			
Carquette	39,600	33,600		4,800	3,524,000 1,200,000			
(ilvaukee					120,000			
loarce	124,200	127,400	4,200		800,000			
ecato	75,600	74,200			646,000			960
peida	55,800	18,200			18,048,000	10,000		960
otagamie	5,400	8,400			320,000		5.000	1.680
epin		-,			320,000		0,000	1,000
herce	111,600	75,600		8,400				
∖olk	36,000	56,600		ļ	1,066,000			
rice	131,600 57,600	156,600 66,600			984,000 2,040,000			1,800
Racine	1	,	1					
tichland	10,800 70,200	85,400		9 200	1,242,000		. 8,000	1,920
lock _	27,000	00,100		8,200	200,000 1,506,000			3,000
Lnek	115,200	81,000		4,800	1,164,000			3,000
St. Croix	118,800	91,200	1	10,400	396,000		I	

154 Wisconsin Conservation Commission

DISTRIBUTION BY COUNTIES 1915.

County	Brook Trout Advanced Fry	Rainbow Trout Advanced Fry	Brook Trout Fingerling	Rainbow Trout Fingerling	Wall-eyed Pike Fry	Black Bass Fry	Black Bass Fingerling	Perch Finger- ling.
Sauk	77,400	29,400			3,000,000			
Bawyer	55,800	22,400		3,600	1,756,000]		
Shawano	252,800	159,200		l	2,728,000	2,000		960
Sheboy gan		51,400	2,700		1,446,000	ļ	15,000	1,380
Taylor	10,800	27,200			1,258,000			
Trempealeau	91.800	170,800	12,000	16,800	340,000	1		2,760
Vernon	91,800	36,400	3,300	5.600				
Viles	54,000	101,800		l	28,858,000	12,000		
Walworth	87,800	5,600		l	3,348,000		9,000	2,760
Washburn	61,200	51,200			6,672,000	12,000		
Washington	12,600	l	1		1,582,000		5,000	4,680
Waukesha	95,400	39,200			6,672,000		91,000	3,840
Waupaca	133,200	77,400			934,000			960
Waushara	854,000	670.400	3,600		1,310,000		5,000	
Winnebago					3,078,000			27,000
Wood	77,400	68,400		ļ	1,632,000			960
Total	5,990,600	4,786,000	63,200	146,700	142,532,000	50,000	178,000	81,300

BIENNIAL REPORT

DISTRIBUTION BY COUNTIES 1916.

County	Brook Trout Advanced Fry	Rainbow Trout Advanced Fry	Wall-syed Pike Fry	Black Bass Fry	Black Bass Fingerling	White Bass & Perch Fingerling
Adams Ashland	54,000 144,000	24,000 166,800	1,722,000			
Barron Bayfield Brown	120,690 329,400 45,000	73,600 209,600 7,200	1,722,000 1,688,400 3,791,600			
Buffalo	36,000	9,600 16,000	453,600			
Calumet Chippewa Clark	14,000 26,000 25,200	64,000	592,200			
Columbia	36,000 80,000	27,000 57,600	1,212,000			1,20
Dane Dodge	25,200 113,200 18,600 18,000	41,600 163,600 6,400	15,840,000 300,000		35,000 20,000	3,60
Door	18,000 167,400	5,400	2,468,400	24,000		
Dunn Eau Claire Florence	111,600 122,400 36,000	46,400 49,200 24,000 54,000	1,042,600 327,600 780,000	,		1,20
Fond du Lec	87,800	21,600	400,000 2,294,000			3,90
Percet	84,600 68,000 46,000	81,600 68,800 28,800				
Green Lake	5,400 48,000	5,400 12,800	200,000			12,00
Iron Jackson Jefferson	91,800 10,800 19,200	16,000 104,000 16,000	2,162,000 138,000 3,842,000	28,000	30,000	2,40
Juneau Kesosha	6,000	25,600 7,200	1,384,000 900,000			1,92
Kewaunee La Crosse La Favette	102,000	79,200 28,800	506,000 1,200,000 250,000		Y. 300	
Langlade Lincoln	46,800 64,000	5,400 50,400	1,886,000 1,196,000	24,000 36,000	Y. 1,200	1,04 1,20
Manitowoo Marathon Marinette	37,200 64,200 194,800	32,400 113,400 238,400	598,000 1,334,000 1,500,000	12,000		1,44 1,20
Marquette	120,000		······································			
Mource	30,000 66,000 94,800	73,600 91,800 16,000	500,000 368,000 13,224,000	136,000		1.20
Outeganie Omnkee	6,000	16,000				
Perio	102,600	38,400				
Polk. Portage Price	61,200 46,400 101,600	4,800 100,800 124,000	575,200 1,100,000 2,100,000			4,48
Racine Richland	12,000 32,000	51,200	642,000		4,000	2,16
Rock Rusk St. Croix	36,800 61,200 126,000	28,400 124,800 51,000	1,600,000 598,000 403,200		24,000	2,64
Seak Sewyer	44,000 82,800	32,000 85,000	2,304,000 1,658,400			1,20 1,44
Shewano Sheboygan	243,000 8,000 30,600	174,400 7,200 17,200	1,196,000			3, 18 1, 44

DISTRIBUTION BY COUNTIES

1916.

County	Brook Trout Advanced Fry	Rainbow Trout Advanced Fry	Wall-eyed Pike Fry	Black Bass Fry	Black Bass Fingerling	White Bass & Perch Fingerling
TrempealeauVernon	36,000 18,000	88,000 48,000	552,000			
Vilas	43,200	90,000	17,413,000	132,000		
Walworth	32,000		3,062,000		4,000	5,340
Washburn	73,800	20,800	7,055,200	24,000	Y. 500	1,200
Washington	6,000	15,600	3,696,000	 	Y. 400 16,000	3,240
Waukesha	56,000	26,400	7,192,000		Y. 4,847 303,000	4,440
Waupaca	82,000	108,000	1,418,000			1,730
Waushara	143,000	523,800			Y. 1,000	
Winnebago			8,951,000	······································	····	19,000
Wood	12,000	104,400	966,000			
Total	4, 258, 200	4,054,200	128,782,400	416,000	448,000 Y. 8,247	73,990

Y. Yearling.

STATISTICS ON COMMERCIAL FISHING INDUSTRY LAKE MICHIGAN AND GREEN BAY.

YEAR-1915.

VARIETY	272,516 328,345 1,915,011 505,371 160,145 91,970 834,602 104,954 767,879 333,129 188,405 63,661 708,976 2,725,478 3,186,566 1,613,562 1,117,768 3,186,566 1,613,562 1,445,268 18,590,071	\$16,083.11 31,792.57 102,094.80 35,527.22 6,623.99 3,466.61 54,524.88 3,046.21 44,373.44 21,239.47 7,602.7 2,469.6 26,038.00 91,934.5 30,171.7 28,749.6 6,909.6 37,671.8 32,625.6 23,415.5
darine Milwaukee Dort Washington Dort Washington Dostburg (including Thiensville) Dostburg (including Thiensville) Dostburg (including Thiensville) Dostburg (including Thiensville) Dostburg Do	328, 345, 51, 1915, 011, 1505, 371, 160, 145, 171, 160, 149, 170, 170, 170, 170, 170, 170, 170, 170	31, 792, 5; 102, 094, 80 35, 527, 22 6, 623, 90 3, 466, 69 54, 524, 88 3, 046, 22 44, 373, 44 21, 239, 44 7, 602, 7, 2, 469, 6, 26, 038, 00 91, 934, 5; 30, 171, 7, 28, 749, 6, 6, 909, 69 37, 671, 88 32, 625, 6;
All waukee oort Washington ledar Grove lostburg (including Thiensville) heboygan Annitowoc wo Rivers ligoma lewaunee lew	1,915,011 505,371 160,145 91,970 834,602 104,954 767,879 333,129 188,405 63,661 708,976 2,725,478 765,815 1,117,768 3,186,556 263,606 1,613,562 1,496,964 1,145,268	102,094,84 35,527,26 6,623,96 3,466,68 54,524,88 3,046,22 44,373,44 21,239,44 7,602,7 2,469,6 26,038,0 91,934,5 30,11,7 28,749,6 6,909,6 37,671,8 32,625,6
cedar Grove Gedar	505, 371 160, 145 91, 970 834, 602 104, 954 767, 879 188, 405 63, 661 708, 976 2, 725, 478 3, 186, 556 263, 606 1, 613, 562 1, 496, 964 1, 145, 268	6,623,9 3,466,6 54,524,8 3,046,22 44,373,44 21,239,44 7,602,2 26,038,00 91,934,5 30,171,7 28,749,6 6,909,6 37,671,8 32,625,6
ledar Grove loostburg (including Thiensville) heboygan Aanitowoc wo Rivers ligoma Cewaunee Luxemburg turgeon Bay & Sawyer orts above Sturgeon Bay brussels luamico & Little Suamico. Green Bay (City) De Pere Marinette and Peshtigo Densaukee VARIETY	160 , 145 91 , 970 834 , 602 104 , 954 767 , 879 333 , 129 188 , 405 63 , 661 708 , 976 2 , 725 , 478 765 , 815 1 , 117 , 768 3 , 166 263 , 606 1 , 613 , 562 1 , 496 , 964 1 , 145 , 268	6,623,9 3,466,6 54,524,8 3,046,22 44,373,44 21,239,44 7,602,2 26,038,00 91,934,5 30,171,7 28,749,6 6,909,6 37,671,8 32,625,6
heboygan. Manitowoc. Wo Rivers. Igoma Kewaunee. Luxemburg. Luxemburg. Ports above Sturgeon Bay Brussels. Luamico & Little Suamico. Freen Bay (City). De Pere. Marinette and Peshtigo. Deonto. Pensaukee. VARIETY	834, 602 104, 954 767, 879 333, 129 188, 405 63, 661 708, 976 7765, 815 1,117, 768 3,186,556 263,606 1,613,562 1,496,964 1,145,268	3,466,6 54,524,8 3,046,2 44,373,44 21,239,4 7,602,7 2,469,6 26,038,0 91,934,5 30,171,7 28,749,6 6,909,6 37,671,8 32,625,6
heboygan. Manitowoc. Wo Rivers. Igoma Kewaunee. Luxemburg. Luxemburg. Ports above Sturgeon Bay Brussels. Luamico & Little Suamico. Freen Bay (City). De Pere. Marinette and Peshtigo. Deonto. Pensaukee. VARIETY	834, 602 104, 954 767, 879 333, 129 188, 405 63, 661 708, 976 7765, 815 1,117, 768 3,186,556 263,606 1,613,562 1,496,964 1,145,268	54,524,84 3,046,21 44,373,44 21,239,44 7,602,7, 2,469,6, 26,038,00 91,934,5 30,171,7, 28,749,6, 6,909,6, 37,671,8,00 32,625,65
Manitowoc wo Rivers ligoma cewaunee cuxemburg turgeon Bay & Sawyer oorts above Sturgeon Bay brussels cussels cussels different Bay (City) be Pere Marinette and Peshtigo bensaukee	104,954 767,879 333,129 188,405 63,661 708,976 2,725,478 765,815 1,117,768 3,186,556 263,606 1,613,562 1,496,964 1,145,268	3,046,22 44,373,44 21,239,44 7,602,7,2 2,469,6,2 26,038,00 91,934,5 30,171,7,2 28,749,6,6 73,508,00 6,909,6,3 37,671,8 32,625,65
looma looma	767,879 333,129 188,405 63,661 708,976 2,725,478 765,815 1,117,768 3,186,556 263,606 1,613,562 1,496,964 1,145,268	44,373,44 21,239,44 7,602,7- 2,469,6- 26,038,0 91,934,5 30,171,7- 28,749,6 6,909,6 37,671,8 32,625,6
lgoma (ewaunee uxemburg turgeon Bay & Sawyer orts above Sturgeon Bay russels uamico & Little Suamico ereen Bay (City) e Pere larinette and Peshtigo conto ensaukee	333, 129 188, 405 63, 661 708, 976 2,725, 478 765, 815 1,117, 768 3,186,556 1,613,562 1,496,964 1,145,268	21,239.44 7,602.74 2,469.64 26,038.06 91,934.56 30,171.74 28,749.65 73,508.06 6,909.69 37,671.88 32,625.63
waunee	188,405 63,661 708,976 2,725,478 765,815 1,117,768 3,186,556 263,606 1,613,562 1,496,964 1,145,268	7,602,7-2,469,6-26,038,00 91,934,50 30,171,7-28,749,60 6,909,60 37,671,80 32,625,6
uxemburg. uxemburg. uturgeon Bay & Sawyer. orts above Sturgeon Bay usmico & Little Suamico. oreen Bay (City) De Pere. darinette and Peshtigo. leonto. leensaukee	63,661 708,976 2,725,478 765,815 1,117,768 3,186,556 263,606 1,613,562 1,496,964 1,145,268	2,469,6- 26,038,0 91,934,50 30,171,7- 28,749,6 73,508,0 6,909,6 37,671,8 32,625,6
turgeon Bay & Sawyer. orts above Sturgeon Bay russels. uamico & Little Suamico. reen Bay (City). be Pere. larinette and Peshtigo. censaukee. VARIETY	708,976 2,725,478 765,815 1,117,768 3,186,556 263,606 1,613,562 1,496,964 1,145,268	26,038.00 91,934.5 30,171.7 28,749.6 73,508.00 6,909.6 37,671.8 32,625.6
vassels uamico & Little Suamico. Green Bay (City) De Pere darinette and Peshtigo. Gensaukee VARIETY	2,725,478 765,815 1,117,768 3,186,556 263,606 1,613,562 1,496,964 1,145,268	91,934.56 30,171.7 28,749.6 73,508.0 6,909.6 37,671.8 32,625.6
russels. uamico & Little Suamico. Green Bay (City) De Pere darinette and Peshtigo. Deonto Pensaukee VARIETY	765,815 1,117,768 3,186,556 263,606 1,613,562 1,496,964 1,145,268	30,171.74 28,749.68 73,508.06 6,909.69 37,671.89 32,625.63
VARIETY	1,117,768 3,186,556 263,606 1,613,562 1,496,964 1,145,268	28,749.68 73,508.06 6,909.69 37,671.89 32,625.63
VARIETY	263,606 1,613,562 1,496,964 1,145,268	6,909.69 37,671.89 32,625.63
De Pere darinette and Peshtigo de Peshtigo	263,606 1,613,562 1,496,964 1,145,268	6,909.69 37,671.89 32,625.63
VARIETY	1,613,562 1,496,964 1,145,268	37,671.89 32,625.63
Pensaukee	1,496,964 1,145,268	32,625.63
VARIETY		32,625.6
VARIETY		
VARIETY	18,590,071	20,410.02
		\$679,869.42
Whitefish	120,916 3,850,765	10,561.98 277,681.29
ake Trout	3,850,765	277,681.29
Bluefin	730,372 2,542,481	15,043.72 112,333.91
Chubs	2,542,481	112,333.9
lerring	5 ,530 ,305	96,943.60
Pike	179,395	14,592.3
Bass	14,854	593.4
erch	2,349,168	69,578.0
Rough Fish	3,271,815	73,329.13
Crawfish (2,635,485)		9,211.8
	18,590,071	\$679,869.4

STATISTICS ON COMMERCIAL FISHING INDUSTRY LAKE SUPERIOR.

YEAR-1915.

	Pounds	Value
Whitefish Lake Trout Bluefin Herring Pike Perch Rough Fish Sturgeon	43,187 511,443 3,783 1,904,202 49,315 166,018 2,673	\$3,516.36 28,274.11 184.10 16,344.15 5,428.13 6.14 3,478.37 302.07
	2,680,710	\$57,533.43
Number of men employed, 163. Number of row boats, 48; value Number of power boats, 48; value Feet of gill nets, 1,163,100; value; Number of tyke nets, 2; value Number of pound nets, 49; value Feet of set hooks, 72,200; value Number of tugs, 2; value Number of sail boats, 2; value		\$1,072.00 24,175.00 24,371.00 150.00 5,425.00 400.00 5,000.00
Total	- 	\$62,408.0

STATISTICS ON COMMERCIAL FISHING INDUSTRY MISSISSIPPI RIVER.

YEAR-1915.

Specie	No. Pounds	Value
Buffalo Carp Bullheads and Cattish Sturgeon or spoonbill Steephead Red Horse Gar and Dogfish Eel Pout	388,214 560,864 60,090 6,066 164,895 4,957 70,834	\$20,216.83 21,361.90 6,256.26 655.66 3,885.80 172.29 632.78
Suckers	24,909	677.74
Total	1,280,829	\$53,859.26

^{*}Out of 177 licenses issued, about 30 failed to render reports.

RECAPITULATION ON COMMERCIAL FISHING INDUSTRY. YEAR—1915.

	Pounds	Value	Investment
Lake Michigan and Green Baylake Superior	2,680,710 1,280,829	\$679,869.42 57,533.43 53,859.26 55,246.72	62 408 00
Total	23 ,932 ,778	\$846,508.83	\$821,049.29

MUSKRAT FUR INDUSTRY.

Number of fur farm licenses issued	118
Licenses issued in Winnebago county	84
Licenses issued in balance of state	
Greatest number of furs sold under one license	*12,125
Total number of furs reported sold (amount received \$27,304.25)	63,459
*Reported by C. H. Sherburne, Fremont, Wisconsin	

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Miscel- laneous.											***************************************																				146,026									2, 962, 176		10027 227	1604, 304	A OAR	2.
Yellow perch.																														918							***************************************			129, 100		001 960	000,10	926 005	96, 990
Pickerel																		•						ફ્ર	.5,840,000		•2.080.000			Š		8	ŝ	ξ				2, 600, 000				900 000	900,000	000	8
Muskel- lunge.										***************************************		4								5	1, 100, 000										420 900									225,000		5	900,900	200 000	
White base.													5 200 000	200 100=10			25	62.345	K13 500		2,5	\$23,420	\$15, 100						1.463.000	3,500	01,250		5	2				28, 300		249,000	41,250			036 995	150
Black bass.																					3																						178,000		
Wall-eyed pike.			1	8,000,000	8	ξ	Ş	Ş	ġ	Š	Š	8	٤	ă	į.	ġ	ġ	٤	ž	Ş	Š	Š	3	Š	క్ల	2	2	25	8	ş	٤	75	Ξ	S	Ş	Ś	į	113,080,000	Š	Š		149 KR9 000	134, 004, 000		128, 782, 400
Lake trout.	35, 257, 000									₹	3	125	8	Š	Ś	249	Ė	8	5	2		8	ž,	79,	Š	877	8	463	g	2	2	ž	8	Ş	ş	3	į		į	į	38		176 500		38, 908, 080
White-fish.	25, 945, 000		9,000,000	8	8		910	1	3	3	90,00	472,500	900		38	96,000	80.00	000	90		10,000	98,99		1	450	820	8	375	278	8	27, 025, 000	210	8							2, 720,000		7 400 000			4. 074. 070
Carp.		.163			253	OR 785	25.50	101	201.10	70,017	5,230	35.591	90 855	202	3	9,69	8, 125	98.525	1	111111111111111111111111111111111111111		: : :															1	Damines	30,3			-	4		18, 490, 000
Salmon.	233, 510										***************************************											T											Rhinefin		375	5		20,000,000	9		Š	27 190 000	ŝ		5.092.000
Rainbow trout.					_	. –			3,000	-	-																				1, 558, 500	8		9	_	9	3	4,080,000	9	3, 206, 500	-	: -	91,00,000	_	••4. 064. 200
Brook trout.	1, 202, 259	1, 988, 900	828, 590	1, 339, 000	2, 605, 000	510 000	9 975 000		2,800,000	2, 235,000	2, 190,000	3, 320, 000	2 820 000	2 245 000	000,047,0	1,635,000	3, 785, 000	2.556 000	3 110 000	20.00	200,000	1, 892, 900	2, 208, 000	2, 393, 000	1,866,500	2, 569, 000	1, 512, 500	2,090,000	2, 937, 000	2 442 500	1 980 000	272,000		323 800				35,000		6, 830, 600		000 600	983,000	3	**4. 258. 200
Year.	877-1880	881	885	883	7	222	800				688	00%	10%	503		293	894	895	808				868	900	106	905	903	Ş	902	900			:					1913)) (0	-	-	1915	e	1016

regnated eggs. † Eggs and fry. † Fry and fingerlings. § Adult fab. ° Fingerlings. ** Advanced fry. fing. • * White hass and perch fingerling. • Green Bay trout. • Croppies. • Roach. Forestry

BIENNIAL REPORT

1717-18

OF THE

STATE CONSERVATION COMMISSION

OF WISCONSIN

FOR THE

Fiscal years ending June 30, 1917, and June 30, 1918



MADISON, WISCONSIN

DEMOCRAT PRINTING COMPANY, STATE PRINTER

1918

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BIENNIAL REPORT

OF THE

STATE CONSERVATION COMMISSION

OF WISCONSIN

FOR THE

Fiscal years ending June 30, 1917, and June, 1918

MADISON, WISCONSIN

DEMOCRAT PRINTING COMPANY, STATE PRINTER

1916

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COMMISSIONERS

W. E. Barber, Chairman......Term expires February, 1919

James NevinTerm expires February, 1921

Chas. W. Thompson, Secretary

Wieconsin Conserv. Coms. 3-28-1924

TABLE OF CONTENTS

Commissioner's Report and Recommendations	9
Wild Life Conservation	15–35
American Sportsmen's Creed	36
Division of Fisheries	37-63
Mussel Propagation, by Experiment and Practice	6 3
Value of Fish Caught and Sold from Outlying Waters	69
Output of Hatcheries for 1917	70
Distribution by Counties for 1917	71
Fish Distributed from Hatcheries for 1918	73
Distribution by Counties for 1918	74
General Routine of a Trout Hatchery	76
Wisconsin Park System	83
Peninsular Park	84
Devil's Lake Park	89
Nelson Dewey Park	91
Interstate Park	93
Brule Park	94
Cushing Park	94
Forestry Division, nurseries	96
Shipments of Planting Stock from State Nurseries	
Forest Fire Prevention Plan	113-120
Financial Statement of Conservation Commission	121-133
Classification of Receipts	135
Inventory	137
Itemized Statement of Arrests	139
Amount of Fines and Costs by counties	140
Classification of Confiscations	142
Statement of Arrests and Seizures by Wardens	_C



F. B. MOODY

F. B. MOODY

Since its last biennial-report was issued this Commission has suffered a grievous loss in the death of Mr. F. B. Moody, its forestry member. Mr. Moody died of pneumonia, at his home in Madison after a brief illness, on August 19th, 1918. He was appointed a member of the Conservation Commission on July 3, 1915, so that his services in that capacity covered

a period of little more than three years.

F. B. Moody was born in Maine in 1880. He was educated in Bates College and the school of forestry of the University of Michigan. He was appointed extension professor in Forestry at Cornell, after having served as assistant State Forester in Wisconsin. When the new Conservation Commission was created he was recalled from Cornell. In September 1917 he was commissioned a captain in the engineer section Officers' Reserve Corps, and was called into active duty on December 28th of that year at Camp Lee, Petersburg, Virginia.

Mr. Moody was an authority in forestry and as teacher and practical worker in the field had gained an enviable reputation in his chosen profession. But he was more than an expert forester. He possessed executive ability of a high order which made him a notable success in his work of administering the new and untried laws under which the Commission began its work. In 1915 the Conservation Commission created by the Legislature of that year took over the functions previously performed by three different departments of the state, and it is only fair to say that much of the success of the new Commission was due to the skill and tactfulness with which Mr. Moody performed his share of the work.

The preceding forestry administration had engendered a hostile feeling on the part of the people living in the forest sections of the state and it required the most considerate and wise treatment of the forestry problems to abate this hostility. Mr. Moody handled the situation so wisely that before the end of two years he had not only removed all feeling of hostility to the state's forestry and park policy, but had secured the friendly cooperation of every man in the northern sections

of the state who had dealings with the Commission. An unwise or careless handling of the situation would have brought serious trouble and have blocked the work of the state as laid out by the Legislature. No member of any state board ever more completely won the good will of the people with whom he had to deal than did Mr. Moody.

The death of Mr. Moody is a distinct loss to the state, and his place will be hard to fill. The loss to his associates on the Commission and to the members of the Commission staff is keenly felt. Mr. Moody was a manly man with whom to be associated was to be helped. Every person connected with the Commission bears testimony to the attractiveness of the man's personality which made association with him at all times a pleasure.

W. E. BARBER JAMES NEVIN.

LETTER OF TRANSMITTAL

Honorable EMANUEL L. PHILIPP,

Governor of Wisconsin.

SIR: In conformity with law, we have the honor to transmit the report of this department for the biennium ending June 30, 1918.

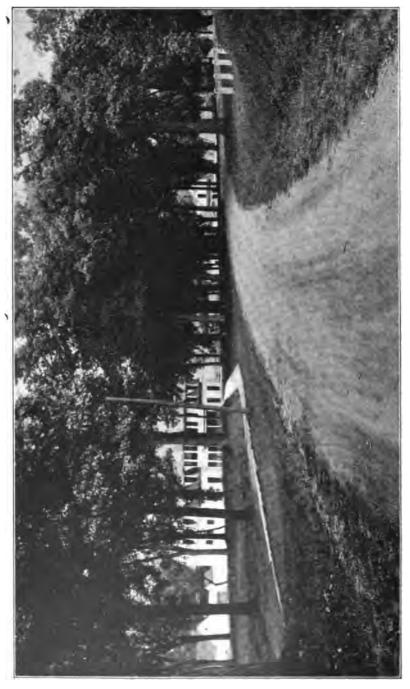
Respectfully submitted,

W. E. BARBER,

JAMES NEVIN,

Commissioners.

CHAS, W. THOMPSON, Secretary.



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COMMISSIONERS' REPORT

Pursuant to statutory command, we take pleasure in submitting our second biennial report. The report covers the period extending from July 1, 1916 to June 30, 1918. We shall try and give a complete statement covering our various activities and at the same time make it brief.

We believe it fitting to preface our report with a statement concerning our activities as a department in "Making the World Safe for Democracy" and upholding the cause of the Union.

Many of the men formerly in the employ of the Commission, and listed below, are now in Government service, some by enlistment and others in response to the call from Uncle Sam.

Several were officers in the National Guard and when that contingent was called, each reported to his company. Two organized companies and were granted captains commissions. Some hold commissions of a lesser degree while others enlisted as privates and are now taking an active part in the National organization overseas. Each and everyone went forth with a determination of a duty to perform with a willingness, if necessary, to sacrifice his all on the Nation's altar. At the time of writing, one of our former employees has made the supreme sacrifice, or in the terms of the army, "has gone west". Mr. John Brekke, but a few short years ago came to the land of the free from Norway. For a number of years was employed at our hatcheries and when the call to arms came, he was inspired with the desire to uphold the principles of democracy by enrolling in the United States army. In the first battle in which he took part, he paid the great price, his life, that the cause of mankind might survive the treacherous Hun.

The response of the Commission as a unit to the appeal for subscriptions to the Liberty loans was most gratifying and is a matter of pride to everyone in the department. It was patriotic and generous and in many cases involved serious sacrifice of comfort, and luxuries for all. Everyone appreciated that the purchase of bonds was a duty and a privilege and afforded an opportunity of investing funds in the world's best security. A record was kept of individual subscriptions, from reports received on our solicitation, and amounts varied according to each man's ability to pay, from \$50.00 to \$1,000.00.

The spirit revealed by employees and the results of their efforts indicate that they recognize their responsibility as citizens and patriots in this emergency. Because of this realization they will continue to bear their full share of our Country's burden.

What we have recited is not for the purpose of self-glorification, but to reveal the spirit of devotion and willingness to make sacrifice when necessary to aid in bringing to a glorious close the great struggle oversea.

Only a few short months ago, America was a helpless giant, from a military point of view. Each passing day sees a steady increase in man power and marshalling of resources. Never did we doubt the quality and courage of our troops and in the supreme test at Chateau Thierry the world joined with us in heralding the American soldier as second to none.

The following list records the members of our Commission who have served in some branch of the military or are at present engaged in doing their bit either in the war zone or training camps.

ROLL OF HONOR.

Name	Position
R. S. Scheibel	Secretary of Commission
Matt Patterson	Shipping Clerk
R. J. Marvin	····Stenographer
W. M. Wollin	· · · · Stenographer
A. R. Brunet	···· Warden
J. B. Fosnot	
W. W. Wismer	· · · · · Warden
John Long	· · · · · Warden
A. S. Childs	· · · · · Warden
R. B. Nolan	Warden
F. F. Russell	Warden
Neal Harrington	Forest Ranger
Percy Weaver	Forest Ranger
Paul Smith	Forest Ranger
George Kilp	Forest Ranger
John Iverson	Forest Ranger
Herman Bauman	Forest Ranger
Hugh Percy	Forest Ranger
P. A. Laurence	Park Superintendent
John Brekke	Hatchery Assistant
Elmer Gallagher	Hatchery Assistant
Christ Faulkner	Hatchery Assistant

BUDGET FOR BIENNIAL PERIOD ENDING June 30, 1921.

Requested Appropriation (Annual)	
For Operation	\$233,500.00
For Repairs	17,500.00
For Capital	11.500.00

General Operation (\$233,500.00)

The amounts we have mentioned as sufficient to meet our needs annually for the next two years is an increase of about sixteen per cent more than was appropriated to our use for the past biennium. The

increased amount is necessary to meet the added costs of material and labor. We were unable to increase the salaries of employees in proportion to the increase in living costs and in justice to all our employees, we request a generous allowance to meet the need. Transportation costs have been increased fifty per cent, supplies equally as much. To administer the affairs of the department efficiently, an increase of the amount we have asked is absolutely necessary.

Repairs and Maintenance (\$17,500.00)

During the last two years there was appropriated annually, \$13,000.00 to keep in repair roads, tools and equipment, painting and repair of buildings, upkeep of hatchery ponds, pipe lines and raceways. It was impossible with that sum to maintain the usual high standard of state property. The closest economy was practiced and repairs made only where absolutely necessary. There is much to be done and to wait longer means a still greater cost in the end. As a matter of economy and good management, the amount requested should be made available.

Capital or Permanent Improvements, (\$11,500.00)

This expenditure may be considered in the light of an investment. New buildings, roads and facilities for accommodating the public in our parks are needed. Each year sees a greater number of people visiting state parks and it is only proper that their comforts should be provided for. Many miles of new roads should be built and to do the work at a minimum of cost, a tractor and heavy wagon trailer should be purchased. To enhance the efficiency of the warden force several cars should be purchased. Several of the cheaper type of cars commonly used could be purchased and maintained at an expense less than it now costs the department for livery hire, hotel expense and railroad fares. Improvements are necessary at several of our hatcheries, new equipment is needed and with all due respect to the necessity for practising economy, we believe that our request is reasonable considering the amount of property under our control.

RECOMMENDATIONS.

A study of the bills presented to the legislature for passage shows that more of them pertain to fish and game than any other subject. Fish and game is a subject in which many persons are vitally interested, and naturally many have ideas of their own which they like to have enacted into law. It is not the intention of the Commission to burden the legislature with numerous bills, but there are several changes we should like to see made that have a direct bearing on a better enforcement of existing laws. The administration of laws provides an opportunity of discovering their weakness. Sometimes a single word is sufficient to defeat justice and to remedy such defects and also present

some new ideas for consideration, we offer the following recommendations:

- Provide a closed season for all varieties of fish on the waters of Lake Michigan from October 21 until November 21.
- 2. That the size of mesh in pound nets be repealed.
- That the law prohibiting the setting of nets in less than forty fathoms be repealed.
- 4. That nonresident hook and line licenses be \$2.00 per year.
- No lake trout less than 16 inches in length be shipped from any lake port or placed in the market.
- No whitefish less than 15 inches in length to be shipped or placed on the market from any port of the outlying waters.
- That all lake trout less than 16 inches caught in pound nets
 must be returned to the waters alive.
- That all whitefish less than 15 inches caught in pound nets
 from the outlying waters must be returned to the waters
 alive.
- A closed season for lake trout and whitefish in the waters of Lake Superior to be from first of October to November 1.
- 10. No gill nets to be set in the waters of Lake Superior of less than 2% inches stretch measure from the first of January to the first of October of each year.
- 11. No nets of any kind to be set in the waters of Chequamegon Bay, from the commercial dock in the city of Washburn, Bayfield county, south and including Ashland county, to the state line of Michigan within two miles of the shore line of said counties.
- 12. That the 8-inch perch law as it applies to Green Bay be repealed and that a 7-inch law be substituted.
- That the minimum size of muskellunge be increased from twenty-four inches to thirty inches.
- Repeal the law providing a minimum size of pike caught with hook and line.
- 15. Amend the deer law so as to permit the killing of bucks only; with horns not less than four inches.
- Authorize construction of a trout hatchery on the state park grounds at St. Croix Falls, Wisconsin.
- 17. Amend the clamming law and provide a \$1.00 resident clamming license.
- 18. Amend Section 4562c by substituting the word "game" for deer.
- Amend Section 29.48 relating to sale of game fish by striking out the words, "from inland waters" and make it applicable to all waters.
- Reduce the amount of bond for guide license from \$200.00 to \$100.00.
- Amend the law pertaining to waterfowl, to make it conform to federal regulations.

- 22. A law providing that all hunters must report their kill of game under their license to the Conservation Commission on blank forms or coupons furnished by the department.
- 23. That a uniform open and closed season for rabbits be established throughout the state.
- 24. That all hunters whether hunting for protected or unprotected game, must secure a hunting license.
- 25. That all commercial fur buyers must operate under a state license, license fee to be not less than \$25.00.
- 26. Unlawful to carry a gun in the counties where there is an open season for deer five days prior to the opening of the season, unless the same is knocked down, or in carrying case, and no loaded shells in possession.
- 27. Amend game fish transportation law to read, "Not more than lawful bag limit of any one variety in one shipment."
- Establishing a wild life refuge on the state lands, Sections 8,
 9, 10, 11, 14, 15, 16, 17, 20, 21, 22, 23, 26, 28, 29, Township
 41, Range 7 East, Vilas county.
- 29. The fine for violations of the law in the polluting of streams to be raised to not less than \$1,000.00.
- 30. That nonresident taxpayers of the state of Wisconsin be granted a nonresident hunting license for large and small game for \$10.00.

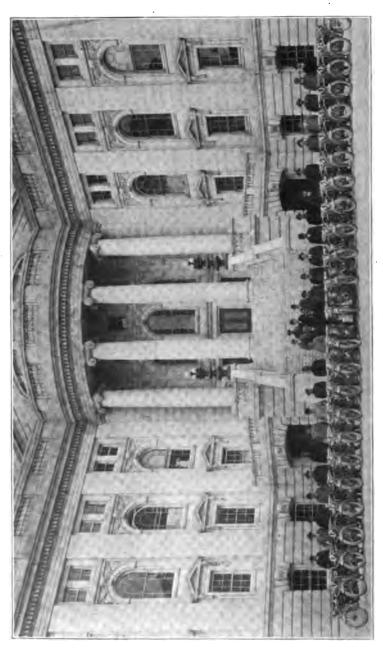
W. E. BARBER,

Chairman,

JAMES NEVIN,

Commissioner.

CHAS. W. THOMPSON, Secretary.



WILD LIFE CONSERVATION

W. E. BARBER

Two years ago when this Commission issued its report, we had operated this department only one year under the law consolidating the fish, game, forestry, and park departments into the department of the Wisconsin Conservation Commission. It was plain to us then, as it is plainer now, that the interlocking of these departments was a wise legislative act, as it materially enlarged and strengthened each division, giving a broader view of the essential relations each division bore to the others, perfecting a more comprehensive system of the entire state, for conservation development.

The old scheme of forestry here, fish and game there, parks yonder, is unthinkable. These great problems of conservation are indissolubly interrelated: The forests and waters interblend and depend one upon the other, and the fish and game upon both. Therefore, viewing it with the importance obtained in efficiency, it proves that what is needed is not separation but closer fusion and a better understanding of the various elements pertaining to conservation.

We have passed that stage in our industrial life when haphazard or antiquated methods will apply. We are living in an age of industrial development which surpasses the fondest dreams of our ancestors, and we are steadily moving on. We must apply the same rules to this business; We cannot succeed in replenishing our denuded forests, streams and fields with game and fishes without the application of the very best methods.

New avenues for information must be provided for obtaining data of the amount and kinds of birds and animals that are taken each year by the hunters, which will enable the commission to more accurately determine whether or not any one or more species of game are increasing or decreasing. There is no way of taking an inventory of the living animals and birds, but a system of accounting for these that are killed each year by the hunters, can be provided, and, with such a system in operation for a few years we can determine whether the killing is increasing or decreasing, which will form a safe criterion for estimating the increase or decrease of the supply. It seems to us that this information is indispensable, if we are to properly regulate the seasons and the bag limits for maintaining the supply of game.

The Commission offered a bill at the last legislative session providing that every purchaser of a hunting license must make a report of the



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game killed under his license, the report to be made on a coupon attached to each license, with columns designating the different varieties of game that could be taken under the license, which must be filled out by the hunter at the close of the year, the coupon to be turned in to the county clerk as his application for his next year's license, the county clerk to forward all reports to the commission. The bill also provided that no hunter could secure another license until said report was made as provided in the law. Such a law would provide a comprehensive system of accounting for the game killed each year and no doubt would disclose many surprises. This bill was killed in the committee but we are not discouraged and will offer the same bill again this year, which we confidently expect will be enacted into law.

TRAPPERS' LICENSES

The Commission offered a bill to the last legislature at the last session providing that all trappers of fur-bearing animals must secure a trapper's license, and with each license issued a blank form for reporting the number of his license, the number and value of each variety of animals taken, and such other information as might be required. This bill was passed and we have been operating under this law during the past year. We sold 24,712 trappers licenses, which was a great surprise, as we had no idea that any such number of trappers were operating in the state and, we were still more surprised when the reports were all in and tabulated showing the tremendous number of fur-bearing animals taken, and the amount received by the trappers for their fur. The report in full is shown as follows:

Muskrats	802.048	\$400.960.10
Skunk	50,304	131,938.20
Mink	22,859	86,469.30
Raccoon	4,651	14,305.60
Weasel	14,883	11,636.50
Fox	1,794	15,295.50
Fisher	559	2,963.40
Wolf	157	1,140.50
*Beaver	537	4,118.20
Bear	32	335.75
Wild Cat	30	29.60
Lynx	19	289.00
Marten	48	100.10
Oppossum	25	28.00
Coyote	13	31.10
Mole	70	8.80
Badger	976	255.55

*Special licenses issued for beaver in Price, Rusk, and Sawyer counties, 100 licenses issued. Largest number reported taken by one trapper, 33.

How many people had any conception that the fur-bearing animals of this state were yielding such an income and that it was so widely distributed?

These animals belong to the people of the state, and it is right that trappers should pay something for the privilege of taking them; it





is also right that they should report to the state how much and what kinds of the people's property they are taking; besides, it is good business. Why should we not also know how much, and what kinds of game the licensed hunter is taking?

We do not know how many trappers' licenses we will sell this year but from appearances the catch of fur will be much less, especially of muskrats. Judging from the appearances of the rat habitations they were trapped out very closely last year, but we will be able to determine the facts when the reports come in for the next season's trapping. If we find the catch much reduced we must add protection by restricting the trapping area or by state-wide closed season.

It seems to us that this is intelligent legislation, and that the same intelligence should be exercised in providing adequate laws for acquiring a comprehensive report of the amount of game taken and its commercial value to the people.

We should also have a fur buyer's license law, requiring that all buyers of furs in Wisconsin must operate under a license, and also report to the commission the amount and kinds of fur purchased. Such a law would stop a lot of illegal trapping as the violator has no trouble under present conditions to dispose of his illegal fur at any season of the year.

POWERS OF COMMISSION

A law was enacted by the last legislature, giving certain powers to the Conservation Commission, in adding protection to one or more species of wild animals. Such power could not be exercised by the commission except by petition from a town or county signed by ten citizens of a township or twenty-five citizens of a county respectively.

This has proven a better law than the Commission anticipated when it was passed, as is proven by the use made of it in the several towns and counties during the past two years. Forty-one petitions have been filed with the commission since this law went into effect asking protection to one or more varieties of fish or game and we have held hearings under each petition and have issued thirty-nine orders granting the prayers of the petitioners.

The first petition filed came from Ashland, Bayfield, and Douglas counties, petitioning that commercial fishermen be prohibited from taking brook trout, brown trout, rainbow trout, steelhead trout, sebago trout, salmon, or any variety of trout excepting lake trout in their nets in Lake Superior. Hearings were held in Bayfield, Ashland and Superior, and an order issued requiring that all trout excepting lake trout taken by commercial fishermen must be returned to the waters uninjured.

Petition No. 2 was presented by Columbia and Sauk counties relating to Lake Wisconsin, petitioning that the size of pickerel be raised from sixteen, to eighteen inches and that the bag limit be roduced from fifteen, to ten pickerel. Pike, all varieties, legal size raised from thirteen inches, to sixteen inches. Black bass, all varieties, legal

size raised from ten inches, to twelve inches. Crappie, bluegill, sunfish, a mixed bag of fifty fish. Hearings were held at Lodi, Columbia county and Merrimack, Sauk county, and an order issued granting the petition.

Petition No. 3 presented by Polk county, asking that Bass's Eay in Balsam Lake, Polk county, be closed to all fishing reserving the bay as a spawning area for black bass. Hearing was held at Balsam Lake and an order issued closing the district as petitioned.

Petition No. 4 was presented by Sauk county, petitioning that clamming in the Baraboo river be prohibited in certain localities. Hearing was held and an order issued that no clam could be taken by the use of crow-foot bars, rake or dredge or with any other device.

Petition No. 5 was presented by Waupaca county, petitioning that Pigeon river, a trout stream, be closed to all fishing for a period of two years to replenish the stream. A large number of citizens of Waupaca county were present at the hearing and much interest was manifested, which resulted in practically a unanimous vote that no order be issued and the commission so ruled.

Petition No. 6 was presented from Eau Claire county, petitioning that Minnow creek, a trout stream, which runs through the normal school grounds of the city of Eau Claire, be closed to all fishing. Hearing was held and Minnow creek ordered closed by the commission, and grounds posted.

Petition No. 7 was presented from Vilas county, petitioning that the legal size of muskellunge be raised in all the waters of Vilas county from twenty-four inches, to thirty inches. Hearing was held at Eagle River, and the prayers of the petitioners were granted.

Petition No. 8 was presented from Fond du Lac county, petitioning that the closed season for rabbits be extended to October 15. Hearing was held and order issued by the commission closing the season as petitioned.

Petition No. 9 was presented from Ashland county, petitioning that Chequamegon Bay be closed to commercial fishing. Hearing was held and an order issued by the commission closing the bay one mile from shore line in Ashland county.

Petition No. 10 from Hubbleton, Jefferson county, petitioning that that portion of the Crawfish river running through Jefferson county be closed to the seining of carp. Hearing was called and a very large crowd attended the hearing, showing that the citizens in that vicinity are deeply interested in commercial fishing. It developed that the opposition to the commercial fishing of the river were laboring under a misunderstanding of the situation, which was entirely removed in the discussion, and it was unanimously voted at the conclusion to continue the fishing as in the past.

Petitions were received from Ashland, Barron, Bayfield, Burnett, Chippewa, Clark, Douglas, Eau Claire, Florence, Forest, Iron, Jackson, Langlade, Lincoln, Marathon, Marinette, Oconto, Oneida, Pierce, Polk, Price, Rusk, St. Croix, Sawyer, Shawano, Taylor, Trempealeau, Vilas,

Washburn, and Wood counties, petitioning the Conservation Commission to use such methods as the law provides for changing the present deer law and reestablishing the One Buck Law, or such other law as will provide proper protection for conserving the deer in Wisconsin. Hearings were called as provided by law, which we will relate, covering the general developments, as our space will not permit the covering of each hearing separately.

The Commission traveled by car, holding hearings at 8:00 P. M. each evening, devoting the time between the places of hearings in looking over trout streams, lakes, and game conditions, talking with farmers, homesteaders, county officials and citizens to the number of thousands, informing ourselves as to public sentiment relative to the protection of deer, and their interest in the conservation and protection of fish and game. We traveled in all over 3000 miles, and as a result of this long itinerary, and investigation the commission were astonished at the knowledge and interest manifested by the citizens residing in the northern counties of the state in this subject. There were 1286 sportsmen and hunters who attended the hearings, and they all came with an individual idea of what the laws should contain. They were not all of one mind, but as a rule they wanted a law that would protect the deer and at the same time provide an annual open season for hunting them. Every man had an opportunity to be heard without interruption and there was no time set, limiting the discussions, which were, with very few exceptions, dispassionate, and allowed that the commission were earnestly striving to cooperate with the sportsmen for more game and better hunting conditions. We informed the hunters that 53,593 deer hunting licenses or deer tags were sold last year, which meant that 53,593 hunters expected to go into the woods to hunt deer. How many of them went we did not know but we did know that approximately 18,000 deer were killed last year, two-thirds of which were does and fawns; that it was plain that another year's hunting under the present law would necessitate several years of closed season; that we were there to inform them of the conditions and warn them of what would naturally happen if something was not done to save the deer this year; that we were going to leave it to a majority vote of the hunters to decide what action, if any, they wanted the commission to take.

We advised closing the season for does and fawns and providing that only bucks with horns not less than four inches in length could be killed. We put the question to a vote at each hearing, and of the 1286 hunters attending, 1012 voted for a One Buck Law. The Commission took the question under advisement and, while firmly of the opinion that a One Buck Law is the only law that will conserve the deer, and permit an annual open season, we did not want to go counter to the legislature.

The buck law was thoroughly discussed before the legislative committees of the legislature at its last session and they refused to recommend its passage, and the commission finally decided to protect the fawns this year, and have issued an order closing the season for killing

them. This order is generally approved by the hunters and, they say, there can be no excuse for killing the baby deer. We confidently believe that every member of the legislature will approve the action of the Commission in making this regulation. There was a tremendous slaughter of deer last year and to permit the slaughter to continue this year would have practically exterminated the deer in this state. We therefore contend that the law giving this power to the Commission to make regulations to add protection to one or more varieties of game has materially reduced the danger to which they were exposed under the law.

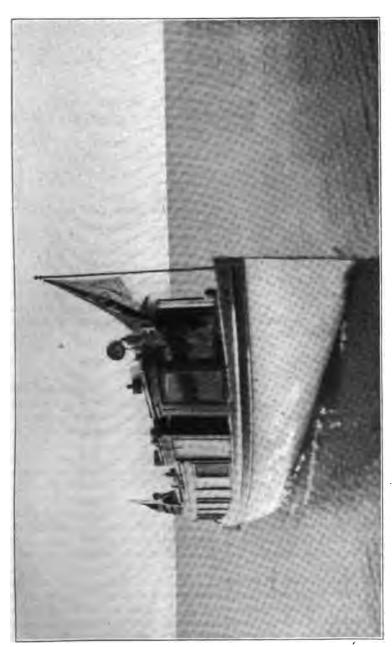
Two years intervening between legislative sessions is a long time and much havor is often raised with fish and game during that time and the power vested in the Commission obviates this danger. Had this law been enacted a few years sooner no doubt the season for hunting partridge and prairie chicken would have been closed one year sooner than it was, which would have prevented the precarious condition threatening the extermination of those birds awaiting legislative action. The law is fundamentally right, as has been proven through the use made of it during the past two years.

In reviewing the number of petitions that have been filed with the Commission it shows the active interest that people are taking in fish and game protection. The hearings in nearly every instance were well attended, some of them bringing out over one hundred interested sportsmen, which gave the Commission an opportunity of meeting them and talking over the various questions, and we are satisfied that it has removed much of the prejudices that formerly existed toward the department and developed a more friendly spirit of cooperation, which, is most essential to the success of this work.

The Commission have been greatly benefited in getting the views of hundreds attending the hearings, through the friendly discussions obtained. We believe those present went away fully satisfied that the Commission are earnestly endeavoring to increase the game supply and improve hunting conditions. We were not embarrassed through discourteous remarks, and a respectful and orderly decorum was manifest throughout.

CONSERVATION WARDENS

The vicissitudes of war and the dark sceptre of death have greatly reduced the ranks of this division. Wardens Wismer, Frank Russell, E. F. Fosnot, A. R. Brunet, R. B. Nolan, John Long, and A. S. Childs, enlisted when the call went out for men to join the colors. Warden Jakoubek joined the force in Uncle Sam's secret service department, and death claimed Wardens A. G. Russell of Wabeno, Wm. Barnhardt of Sturgeon Bay, and A. I. Hulbert of Barron. B. J. Shaver left the state employ to join the federal service of the bureau of Biological Survey, Washington, D. C. George Bernett resigned to enter other employment. This thinning of our ranks has disarranged the warden force very materially, and consequently has reduced the high standard



WARDEN PATROL BOAT "GALATEA."

of efficiency formerly maintained. It was not thought advisable to fill the places of the wardens who went to the army, as new men would require considerable time to become efficient and would only be employed for the duration of the war when the enlisted wardens would return. Fosnot, Frank Russell and Brunet have returned and are back at work, and one warden has been put on the force in place of Bernett.

The places of the deceased wardens have not been filled but will be very soon now that the new civil service list is prepared and men are available in the territories where they are needed.

A. G. Russell, Wm. Barnhardt and A. I. Hulbert who were called by death were counted among our most efficient men. They were diligent, conscientious and broad-minded, and felt the same responsibility of giving a square day's work and accurate account to the state of Wisconsin as though their employer had been a private individual. They were highly respected in the communities where they lived and, by their brother wardens and the Conservation Commission.

There are at the present time fifty-eight wardens on the regular force, besides eight forest rangers who are engaged most of the time during the winter months in the warden service. We also have one hundred and five nonsalaried special wardens who are of great assistance in suppressing violations, many of them giving considerable active service in assisting the regular wardens in various localities. With this total force of one hundred seventy-one men we are able to keep the offenders well in hand.

EQUIPMENT

The force are in need of additional equipment for conveyances. We are still using the twenty-five motorcycles purchased two years ago, but many of them are badly worn and the up-keep has become excessive and they should be disposed of either by trading them in as part payment on Ford cars or by selling them for what they will bring.

We have purchased four Ford cars during the past year and they are all in good order and provide the most economical conveyance when efficiency is considered. They can be used at any season of the year and over any sort of road, which is most essential in our work.

It seems to us that the legislature should provide us with sufficient funds for properly equipping our men, as we are self-sustaining and, including the fines collected which revert to the school funds of the state, we are turning into the treasury much more than we are receiving.

Our income could be increased over \$20,000 each year by charging \$2.00 for nonresident fishing license instead of \$1.00, which is not excessive and not more than many of the other states are charging. This additional income would thoroughly equip our men and would add tremendously to their efficiency.

Twenty-four of our wardens own cars and the state is paying them 8c per mile for the miles actually traveled while in the service of the state, the wardens paying for all repairs, gas, etc. This to our mind is all wrong. In the first place, our men are not financially able to own cars but they are anxious to cover and properly take care of their territory and they assume the burden in order to give the services required.

Our source of income is through the sale of the various licenses, sale of rough fish, and confiscations, and our income always increases through efficient warden service in enforcing the laws. Besides, the sportsmen demand service because they are paying the bills. If we could have a \$2.00 nonresident fishing license it would furnish the necessary funds for giving us the much needed equipment.

We need a couple of high-powered launches on the Mississippi river to compete with the equipment of the law-violators operating there, and we also need a fast launch in Milwaukee for use on Lake Michigan. We have never had a suitable boat there, and it is needed frequently during the spring and fall especially, as the ducks are plentiful and open-water shooting is practiced constantly. There isn't any question but what the people are willing to pay their money for licenses if by so doing the fish and game can be properly protected.

ABANDONED DAMS

A law was passed at the last legislative session providing that whenever the Conservation Commission should determine that the conservation of one or more species or variety of wild animals will be protected thereby the commission is authorized to maintain and repair any dam located wholly upon lands, the title to which is in the state either as proprietor or trust for the people; subject, however to the powers of the Railroad Commission to fix the level and regulate the flow of the public waters.

The Conservation Commission have had occasion to repair one dam during the past year located at the mouth of Big Muskego Lake, Waukesha, county. This lake was drained several years ago by a corporation under a charter granted them by the Wisconsin legislature, but which was later declared unconstitutional by the Supreme Court. The court in its ruling ordered that the drainage ditch be filled by said corporation, but they had failed and the project abandoned before the judgment of the court was rendered.

A number of interested citizens raised a fund and constructed a dam at the mouth of the lake, raising the water several feet back of the dam, which they maintained for several years. The Railroad Commission established the water level of the lake two years ago and as the dam was in need of repairs, and there being no funds for maintaining the dam, the Conservation Commission made the necessary repairs, with the assistance of a number of interested citizens who donated most of the labor of men and teams. The dam was put in good repair at an expense of \$177.25 and should last for several years without further outlay or expense.



Muskego Lake is one of the finest lakes in Wisconsin for fish and game. It ranks with Lake Koshkonong for feeding grounds for ducks and is prolific of black bass and pike. It is a popular lake for fishing and hunting and its close proximity to Milwaukee, with the Interurban Railway running past the lake, makes it a valuable asset to the people of that community and should be maintained.

DEER

Deer, as well as other wild game, have a new weapon pointed at them, more deadly than powder and bullets and much harder to escape, as its range is long and it reaches out into the remote districts where the deer once found refuge, safe from the pursuit of the hunter. The automobile has annihilated this space, and distance no longer protects them. This, with the march of civilization steadily encroaching upon their habitation presents a problem not encouraging to this specie. Does it mean that Wisconsin is to lose her deer, and that the annual deer hunting season, now halled with delight by the hunters, will be closed forever, and another of the pioneer customs recorded in history with the dead, but not forgotten past?

This may sound like an obituary to the deer of Wisconsin which perhaps would be a little premature, but the melancholy story of their extermination will soon be written if the sportsmen and the legislature do not come to the rescue and extend the strong arm of the law for their protection.

As previously stated, 53,593 hunters purchased deer hunting licenses, or tags, last year and they killed approximately 18,000 deer, three-fourths of which were does and fawns. Does any sane man contend that these animals can stand that sort of killing? True, fawns are protected this year, which must help some, but stronger protection must be given them or they will soon be shot to death. High-powered rifles to shoot them with, and automobiles for accessibility to their grounds, and the present law in force, will sound the death knell to the deer in Wisconsin within five years. A One Buck Law is the only law that will protect the deer and provide an annual open season.

A closed season is not desirable as the sportsmen lose their interest in the game; besides, it is not necessary. If we protect the deer properly, and hunt them sanely, we can keep the deer as a game animal for years to come.

PRAIRIE CHICKEN

We are more cheerful in reporting the condition of these birds than we were when we wrote our report two years ago. A marked improvement has taken place, and the prairie chicken are responding most splendidly to the protection afforded them under the present closed season.

Nearly every county in the state have a few birds and several counties have a large number. We should not think of opening the

season for a couple of years more, when we should have a short season of good shooting each year. It would be suicide to these birds to open the season inside of two years, for they were so nearly exterminated when the present law was enacted that it requires time for their rehabilitation. They are one of the finest game birds in America and the sportsmen realize this fact, and they are behind the Commission in recommending a continued closed season for two more years.

PARTRIDGE

The same story is true of the partridge as of the prairie chicken, only more so. There is no longer any question as to the status of this greatest of America's game bird. There is such a marked increase of them in every quarter of the state that the sportsmen may laugh out loud, and thank their lucky stars that they are on the highway to recovery. Never again should we permit these birds to approach the danger line of extermination.

It seems strange indeed that a state, such as Wisconsin, that ranks second to none in the United States for fishing and hunting, that has more red-blooded sportsmen to the square mile than any state of like population, should tolerate for a moment any danger befalling its fish and game resources.

We can raise prairie chicken and partridge as easily as the farmer can raise his domestic fowl if we all try. This word ALL is a big word as used, but why should the sporteman seal his lips to the poaching upon these birds. He says he detests a squealer, but a squealer on a poacher is ten times more honorable than one who squeals because the birds are gone, and for which he shares the responsibility. When we all become squealers, the birds will thrive, but not until then.

We should continue the closed season on these birds for two years more when, with favorable conditions, we can safely provide a short open season.

BEAVER

In 1903 the Wisconsin Legislature passed an air-tight law protecting the beaver. At that time there were only three colonies left in the state and there was little hope at that time that beaver in Wisconsin would ever again become plentiful, but their prolific tendencies is fully established in the thousands that now inhabit the northern counties of the state. They are so plentiful that they have become a nuisance in some localities.

The legislature at its last session opened the counties of Rusk, Sawyer and Price for trapping them during the month of December. The bill also provided that the trapper must secure a license and that the cost of the license to be \$2.50. We sold an even one hundred licenses, five hundred and thirty-seven beaver were trapped, and \$4118.20 received from the fur. We believe at the close of the season in 1918 protection should again be extended to them in these counties.

We have complaints occasionally of their damming up streams and flooding the lowlands, causing some damage: we have also had a few complaints from highway commissioners of their flooding highways that extend through lowlands in different places.

The law gives authority to the commission to take care of all complaints of damage being caused by them, and we have been able to relieve all pressing situations. The present laws are sufficient to properly protect the beaver except that Rusk, Sawyer and Price counties should again be closed by the legislature in 1919.



BEAR HUNTERS IN NORTHERN WISCONSIN.

BEAR

Never before was the bear protected in Wisconsin until the 1917 legislature provided a closed season extending from December 1 to November 10 of each year. Ever since old Bruin has been protected he has been "raising Cain" and his conduct has been very boisterous and we doubt if there has been a sheep, calf or porker killed in the counties where old Bruin holds forth that has not been charged to him. One sheep-raiser in Taylor county claims that the old beast put him out of business in raiding his sheep flocks, killing a large number of his sheep, until he was forced to sell out or face bankruptcy. Another complaint came from a lady who claims the old brute killed her sheep to the value of over \$700.00. Other minor complaints have come to us of his depredations but not one complaint of damage by wolves or foxes has been entered, probably because they are not protected.

Bear have become quite plentiful in the north part of the state and we advise that, owing to his voracious habits, the law protecting him should be repealed and that he again be exposed to his revengeful pursuers.



COW ELK IN STATE GAME FARM

ELK

Wisconsin received an allotment of forty elk from the National Preserve in Yellowstone Park, Wyoming, March 12, 1917, and they were liberated in the game farm enclosure at Trout Lake. They arrived in good condition, but the weather was severely cold and the ground was covered with fourteen inches of frozen snow, which offered them a mighty cold reception.

The cold weather and change of altitude developed pneumonia which attacked nearly the whole herd and necessitated the constant services of a veterinarian for about a month, and we escaped with a loss of fourteen Elk, leaving us a herd of twenty-six. The herd were all young, thrifty animals and since they have become acclimated they have done well, and we should have within a few years a substantial herd. From the fact that these were all young animals we have had very little increase thus far but the coming year we should realize considerable increase.

We have learned considerable from this experience regarding the importation of these animals, that will be useful should the state ever undertake another venture of this sort. The elk should be kept in the corral at the point of shipment until the 1st of May, which would bring their arrival here in the warm spring days in May, which would obviate the danger of climatic disease. Those we have on hand are in fine condition and we can reasonably expect a thrifty increase each year from now henceforth.

GAME FARM

There is little to report on the game farm excepting that it is becoming overstocked. The deer are increasing each year and the adding of the Elk stock has over-taxed the feeding grounds and we should
enlarge the enclosure. We had planned to do this work this year and
had the posts cut last winter and hauled out ready for use but the
war-time prices of wire fencing prevented our going on with the work.
As soon as times revert to normal conditions we will double the size
of the enclosure, which will provide range and food sufficient for years
to come.

As near as we can estimate there are one hundred twenty-two deer and thirty elk counting old and young, and the enclosure contains about three hundred acres of brush lands.

WILD LIFE REFUGES

The conservation of wild life has become of world-wide importance and our national Congress has set aside millions of acres of wild lands in various sections of the United States as national preserves, where no hunting is allowed, and where federal wardens are steadily employed in destroying vermin and guarding against poachers, making the preserve a sanctuary, for wild game instinctively seek quiet and

safety. The Wisconsin legislature at its last session passed the first law recognizing the importance of the sanctuaries, giving authority to the Conservation Commission to establish sanctuaries on private lands upon petition by the owner or owners of said lands. Pursuant to this law the Commission have established four large refuges located as follows:

One in Rusk county comprising 1280 acres;

One in Douglas county of 4000 acres;

One in Barron and Washburn counties of 6840 acres; and

One in Jackson and Eau Claire counties of 600 acres.

All of these refuges are fenced and posted as provided in the law.

Townships No. 38 North, of 12 and 13 East, Forest county, all state lands were set aside as a refuge by the legislature in 1915. Lines have been cut out along the boundary and the refuge posted as required by law.

To make these forest preserves fulfill the function for which they are designed they must be made a sanctuary in every sense the word implies, which means, that they must be patrolled and the vermin and predatory animals destroyed and poachers kept without the boundary.

Tamarack Farm Refuge in Douglas county, Rice Lake Refuge in Barron and Washburn counties, and the Forest County Refuge are ideal in natural environment for every variety of animals and birds native to this climate and we propose to give them the necessary care and attention to get the full measure of results.

These three refuges are sufficiently large and important to warrant the steady employment of a warden in each of them, and we propose to give them this necessary supervising. The refuge plan for increasing the wild life supply has passed the experimental stage as has been demonstrated by the Federal government. The State of Pennsylvania has given the refuges the longest and most systematic test of any of the states, and the refuge plan is vouched for most enthusiastically by the Fish and Game Commission of that state. Wisconsin will not lag behind in this work, for to our minds it is the most sensible method of preserving and increasing our wild life supply.

MIGRATORY BIRD TREATY ACT

The passing of the Enabling Act by our National Congress July 3, 1918, giving effect to the convention between the United States and Great Britain for the protection of migratory birds migrating between the United States and Canada is, without question, the greatest conservation act ever consummated for the protection of wild birds in all history. It means that the United States Government has thrown around the migratory birds of this country the protecting arm of Uncle Sam and that they are no longer exposed to the inadequate legislation of the various states for their protection.

This law also gives authority to the Secretary of Agriculture to make certain regulations relative to the taking, catching, and killing of migratory game birds and the fixing of the open and closed seasons,

national daily bag limit, possession and commerce in these birds, and the authority to employ federal wardens for the enforcement of the law.

With this protection provided, augmented by the state laws and state wardens, the migratory birds are amply protected to insure their permanent well-being. It has always been a mooted question with the hunters since Wisconsin has passed legislation protecting the migratory game birds that we were passing laws protecting these birds, while the southern states were permitting the indiscriminate slaughter and sale of them. There was much truth in the argument, and when Wisconsin passed the first law prohibiting spring shooting there was a storm of protest that it was open discrimination in favor of the other states. The old federal migratory bird law sprang into existence shortly afterward which offered some relief and brought about a more equitable condition but, the question of the constitutionality of the law was soon raised, which offered a pretext for many of the states, in the framing of their laws, and they placed little credence in its provisions. They proceeded to frame their state laws entirely ignoring the federal statutes, allowing spring shooting, early and late shooting, and every sort of shooting, which resulted in arrests by federal wardens and court trials, and finally landing in the Supreme Court where they were waiting decision when the present treaty act went into effect, settling the cases once and for all.

There is no question of the constitutionality of the present Federal law and the birds and the hunters are equally protected under its provision. We confidently expect that the federal authorities will be diligent in the enforcement of the law, especially in the states where there is a lack of law, or law enforcements and proper cooperation with the Federal authorities in executing laws.

There has been a great increase in the flight of all varieties of migratory birds in this section of the country, which we attribute to the protection offered through the old migratory bird law. Many of the states observed its provisions and framed their state laws to conform with the Federal regulations which has greatly increased all varieties of migratory birds. It has done a lot of good, whether it would have stood the test of the Supreme Court or not, and we rejoice that we now have a law that all must respect.

GUN LAW

We have constant complaints of the early hunters establishing their hunting camps in the deer territory many days before the opening day of the season, preparatory to getting a few days early hunting before the season opens and before the law-abiding sportsmen undertake to hunt.

There is no doubt of the truth of this statement as our wardens oftenfind them in the woods with loaded rifles, but as they have no game in possession, or any in sight, we have no case against them. They hide their deer securely until a few days after the opening of the season when the carcass appears with his respective deer tag attached. This is unfair to the law-abiding sportsman, and we should have a law that would make it impossible to start this early hunting without easy detection.

We should have a law prohibiting the carrying of a gun in the woods in the counties where there is an open season for deer ten days prior to the opening of the season unless the same is knocked down or in a carrying case and no loaded shells in possession. Then if a warden intercepts a deer hunter with rifle in possession he will not be obliged to hunt up his hidden venison to establish a case aganist him. Such a law could work no injustice or hardship to the law-observing sportsman and would do away with a contemptible practice.

PLANTING OF DUCK FOODS

This is a subject worthy of the attention of every sportsman of the state, as the future supply and distribution of the aquatic waterfowl depends largely upon the supply of food. The state has never given the subject any thought or attention, but it is time now that we enlarge our scope and provide for a larger and wider distribution of these birds.

No well-informed sportsman denies that the supply of aquatic waterfowl has increased very materially since the migratory bird law went into effect, and as we have every reason to believe, they will continue to increase, as the amendments to the Federal law materially strengthens it thus, the migratory flights should increase from year to year. Therefore, we should prepare to receive them with an abundant supply of food so that they will not be forced to continue their flight northward in order to find food.

We have thousands of good lakes in Wisconsin, yet but few of them have any sort of duck foods, and no attempt has ever been made to plant them. We should start at this work this year and pursue an aggressive system of widely distributed planting, and follow up the work each year until a large portion of the lakes are supplied with food, which will in time distribute the birds, and enlarge the hunting area, and enable the citizens of the state to enjoy the season's hunting in closer proximity to their homes. Waterfowl are the only birds left to hunt and they should have proper protection and food, which will insure this sport for all time.

SKUNK

This pesky animal has enjoyed the protection of a closed season extending from February 1, to November 15; for the past two years. Never before has the legislature given this mischievous little animal protection and we doubt the wisdom of this law. True, their fur is of considerable value but, if there was no protection, and no closed season provided, we believe the fur sales would be equally as much. The damage they do to the ground-nesting birds and to domestic fowls would far overbalance any possible added value to the fur produced from the protection afforded.

In the first place, skunk are a most prolific animal and through the protection afforded they are multiplying tremendously and are becoming a nuisance in various sections of the state. There is a general demand from the farming districts of the state for an open season during the entire year, and we advise that the law protecting them be repealed.

EDUCATION

This important work has been given substantial attention since we submitted our last report, and we confidently expect that within the coming year that our plan as outlined in that report will have been carried out, and that the study of wild life will be placed upon the curriculum of our public schools with regular periods of recitation established.

The first question to be considered in introducing this study into the schools was the securing of a proper textbook adopted to this study. We made inquiry of the various publishing houses and found that there was no publication on the market, suitable as a textbook, and we found it necessary, in order to consummate our plan, to interest a qualified student of ornithology to prepare a textbook.

After considerable correspondence with several well-known students and publishers, we went over the proposition with Prof. Cahn, teacher of entomology at the Wisconsin State University, and he finally concluded to take up the task of preparing the textbook, and had the copy prepared and ready for the printer, when he enlisted in the U. S. army. Here the matter rests, and will so remain until he returns.

We expect Prof. Cahn will push the publication and distribution of this book when he returns, which we have every reason to believe will be eagerly sought after by nearly every school board in the state. The state of Wisconsin, nor any officer of the state, are interested financially or otherwise in this publication; except that the Conservation Commission are interested to see that the study is systematically adopted in the schools throughout the state.

This system of educating our children in this most wonderful and important creation, is opening a field of study endless in its benefits to the citizens, and will place Wisconsin in the front ranks of the pioneer states in going to the root for a healthy growth in public sentiment for the Conservation of the wild life in this state.

The educational campaign carried on by the federal authorities for the conservation of all food resources has been most beneficial and is reflected in the manner in which the people have submitted to all orders, and supported the officials in the performance of their duty. These lessons were learned in the hard school of experience in self-denial and are impressed indelibly upon the minds of the people, which should give tremendous impetus to future educational work in the conservation of every natural resource of Wisconsin.

Education is the most important feature of the conservation work. It is understanding that the people need and, when they understand, the question will be settled and settled right.

THE AMERICAN SPORTSMEN'S CREED

LET ME pause in these momentous days and think with wonder and reverence how the spirit and activity of the American pioneer hunters and fishermen have given us the American soldier—that splendid type of the land of the free and the home of the brave.

I want my boy and his comrades and the boys of the future to receive this heritage of gun and rod. It is a heritage of the open, which now must be idealized to a love of nature and a thoughtfulness for the meaning and preservation of life.

FEELING this, I record my unalterable belief that a Sportsman should:

- 1. Never in sport endanger human life.
- 2. Never kill wantonly, or needlessly or brutally.
- Obey the laws of State and Nation, work for better laws, and uphold the law-enforcing authorities.
- Respect the rights of farmers and property-owners and also their feelings.
- 5. Always leave seed birds and game in covers.
- 6. Never be a fish-hog.
- Discourage the killing of game for commercial purposes by refusing to purchase trophies.
- 8. Study and record the natural history of game species in the interest of science.
- 9. Love Nature and its denizens and BE A GENTLEMAN.

To this ideal I consecrate myself—that sport shall not be my only aim—that my reward and my lesson shall be in the thrill of the chase and the glory of the heights, and the whistle of the stag—in the music of the murmuring stream and the leap of the playing trout—in the gold of the autumn's woods and the whirr of the ruffed grouse—in the sweet soft scent that breathes from off the sea and in the beauty and silence of the lonely hills and dells.

Attest: John B. Burnham, President American Game Protective Association.

Attest: John B. Burnham,
President.

DIVISION OF FISHERIES

By JAMES NEVIN

The field of fresh water fish investigation has been little touched upon. No one assumes that the great number of streams and the numerous lakes and ponds throughout the state are productive to their maximum capacity, yet rarely is due care taken to conserve the practical ways and conditions favorable to the growth and propagation of fish. That the streams, lakes and ponds should be stocked and restocked with fish is an ever-growing demand which indicates the widespread interest in such fishing grounds, whether they serve as a field of recreation or a source of food supply. Stocking and restocking of the waters is, however, the only means for keeping up the supply therein.

The natural destruction begins with the loss of the fertilized eggs deposited by the parent fish on spawning grounds which are eaten by the ground eating fish such as suckers, mullets, redhorse, eelpouts, lizards and in fact by other fish of their kind. A large part of those eggs become covered with mud or silt or are smothered, the young fish eaten by the minnows during the early fry stage, and the fingerling size eaten by the larger fish. This loss cannot be estimated, neither can it be entirely prevented, but one great source of destruction can be controlled by laws that can be made and enforced by man.

Looking back over the period covered by this report, we feel on the whole that our activities in the state's interests in fisheries and fish hatchery operations have been successful and well administered. The high standard of our hatcheries has been maintained and the production has been above normal. In another part of our report will be found tables showing the number and varieties of fish that have been distributed and planted during the past two years in our many lakes and rivers. The demand for fish for planting purposes is on the increase, but we feel that we have met the wants of the public satisfactorily under the existing circumstances.

The propagation of fish has many problems. A large number of eggs may be taken, thoroughly impregnated and hatched, only to become infected with some disease, and millions die just before time for distribution. The road to success for the fish culturist is just as hard and full of bumps as that of the farmer. The farmer with his grain fields promising well for an abundant crop, often meets with serious losses from the wind, storm and hail, drought or hot sun. Similarly,

even the human family itself suffers from epidemics such as Spanish Influenza which has caused the death of many people. Thus unhappy experiences are met with in fish propagation.

Last year at our Bayfield hatchery we put too many brook trout eggs in one basket and the result was the serious loss of fry. We sent the bulk of our brook trout eggs from Madison and Wild Rose hatcheries to Bayfield hatchery as the conditions obtaining there insured a larger hatch and a better opportunity of caring for the fry for a longer period. It was our purpose to hold the trout fry until after the spring floods and plant them when the streams had returned to their normal stage of water. Just before the work of distribution was to begin, we were visited with an epidemic and we lost approximately two million fry. Our foreman, Mr. Ripple, did all that anyone could do to save the fish but without avail.



FIVE WALL-EYED PIKE, TOTAL WEIGHT 6614 POUNDS, TAKEN FROM TOMA-HAWK LAKE, ONEIDA COUNTY, WISCONSIN.

At our Delafield hatchery during the past year, the black bass hatch was about normal and the fry that were sent out, 498,000, were extra large and strong. More than 16,000 fingerlings were distributed during the month of September. The hatch of bass at our Minocqua hatchery was a total failure. The fish spawned on more than two hundred nests but a sudden drop in temperature the middle of June, and the freezing of the water around the edge of the ponds, destroyed the eggs on the eve of hatching, as bass eggs cannot stand any sudden chill.

Last winter we succeeded in exchanging more trout eggs than ever before with both public and private hatcheries. The fish hatched from these eggs are being reared in our hatching ponds in the hope of improving our brood stock and the quality of eggs for propagation purposes.

In the Commission's last report we emphasized the importance of making a survey of our many streams to determine their fitness for planting trout and other food fishes. Two years ago the work was begun and the streams of several counties were thoroughly examined and the data obtained is now in our office. The work was discontinued this year, owing to the necessity for curtailing expenses. We disliked to lose a year in carrying on this important work and we hope that the legislature will provide us with sufficient funds in the future so that a complete survey of the state can be made. Hundreds of applications for fry are received each year for streams about which we have no information. If all the conditions were known we would be in a position to determine whether any particular stream was suited to the kind of fish for which application has been made, and if it were not, we could supply such fish as would thrive. Such a policy would save many trout fry that are now planted in streams unsuited to them.

The Commission, when holding the hearings relative to the protection of deer, traveled by automobile. This enabled us to observe the conditions of many of the inland waters of the state. It called to our attention many streams that we knew only my name. We gained some idea of the size of the stream and the number of fish that would be required to properly stock many of the different streams. We also learned something of the amount of fishing done on some of the different streams that are not being stocked as freely as they ought, to be, to keep them properly replenished. After July 1, due to the small amount of rainfall, we found some of the streams at a very low stage, and we believe that many trout will perish in these waters, especially during the winter months, unless a heavy rainfall should bring the streams up to normal.

During the past summer there was a falling off in the number of nonresident fishing licenses issued. However, it was as good a year for summer tourists as we could expect under conditions that prevailed at that time. We have a good road system now in vogue extending into the northern lake region, and a number of tourists are taking advantage of this and bringing their families with them. One night at Minocqua last June, there were ten automobiles in the garage, one . from each of ten states. With the many people who have bought lake shore property surrounding our lakes and streams, and have built beautiful homes, while others have built cottages and come and stay from thirty days to six months during the year, and again there are thousands of others who come and stay for a few days to a few weeks at the many summer hotels and boarding houses that are located bordering on the lakes. Some come to hunt, others to fish, many for recreation and enjoy outdoor life. These people spend on the whole, several millions of dollars in our state every season and everyone of us receives some benefit from it in some indirect way.

The fishing interests of the outlying waters is of great commercial value and an asset to the state. The propagated commercial fishes are normally relative to the number of pounds caught. Some of the varieties that are not being propagated are decreasing. The lake trout that the Commission are propagating mostly for the outlying



WHITE BASS TAKEN FROM WOLF RIVER, WISCONSIN.

waters, are showing an increase in the number of pounds that are being taken from waters of Lake Michigan and Green Bay. The whitefish caught in the past two years have shown a considerable increase. The state is not distributing the number of whitefish that should be propagated for commercial purposes. The whitefish eggs that are hatched and planted are obtained from the Bureau of Fisheries, Washington, D. C.

The catch of fish in pounds and value received, as reported by the fishermen, caught in the outlying waters of this state for 1916 and 1917, is as follows: In 1916 there were caught 16,988,966 pounds. The value of products sold by the fishermen was \$797,504,77. For the year 1917, the number of pounds caught and sold were 19,808,613, for which the fishermen received \$1.244,768,65.

The law relative to the size of whitefish should be amended. The taking of whitefish that weigh less than two pounds ought to be prohibited. The small fish should be left in the waters until they have reached two pounds or more. They would then be worth more to the fishermen in the increase of pounds caught, and in the intrinsic value of their product. As the law is now, they are permitted to take baby lake trout and whitefish which is clearly a wilful waste of food, that should be made of commercial value to the state.

The legislature will be asked to make a few changes in the laws pertaining to fish conservation. The most important change will be to require an increase in the size of whitefish and lake trout taken for commercial purposes.

Chequamegon Bay in Ashland county was closed to commercial fishing. Many complaints were received the past summer to the effect that commercial fishermen were taking large numbers of game fish in that bay and requested that this be stopped. Lake Superior on the whole is a very deep lake with very little shallow water for fish to spawn in, and the fish eggs to mature. There is also very little shallow water where the sportsman can enjoy any real sport in angling for the purpose of taking game fish. For these reasons the Commission conducted the hearings at Ashland, and as a result an order was issued prohibiting the fishing with nets within one mile of the Ashland county shore line. For many years, commercial fishing in Chequamegon Bay was prohibited, leaving this entire water as a breeding ground and for the protection of small fish. This was done, because it was thought that game fish might be increased in these waters.

A storm on Lake Michigan caused considerable damage to the sea wall and boundary line at the Sheboygan hatchery. The repair of this wall caused an expenditure of some \$2700. This was one of the unforeseen expenditures that the Commission had to contend with.

At St. Croix Falls, the state owns a most beautiful state park, containing several hundred acres of land. A very excellent site with an abundance of pure spring water is to be found on these park lands and suitable for a state fish hatchery. If more water was needed, it could be obtained by drilling some wells. The location is ideal for the purpose of a fish hatchery, and for the building of the necessary ponds. A

fish hatchery at this place would be suitable for the maintaining of many fish as breeders, and for raising fingerling brook trout to be planted in the streams of the state during the autumn months. The plat of ground that is thought of is located between the villages of St. Croix, Wisconsin and Taylor Falls, Minnesota. The Commission wishes it were possible for every member of the legislature to see this site, for it is confident that they would decide that, the state now owning the grounds, it ought to do something to improve their appearance. Why should not this property be made useful as well as ornamental, especially as making them useful would enhance their beauty. The ground proposed for fish hatchery purposes lies on a slope at an angle of 20 degrees. Large, beautiful elm and basswood trees from twenty-five to fifty feet apart, are scattered all over these lands. Trout ponds could be constructed with a fall of several feet between each pond, and some forty to fifty feet long. This property must be seen to be appreciated and nothing could be more appropriate on this park site than a fish hatchery and ponds with many thousands of trout where they would make a most attractive feature of the park, as well as adding to the welfare of the state.

The state fish car, Badger, was generally overhauled and painted this year. It is now in as good condition as the day it was received from the Pullman shops six years ago. This has been the first money expended on the car in that time. The railroads have hauled the car free for the purpose of distributing fish, the only charge being made was railroad fare of 4 cents per mile for two messengers in charge of the car. The Federal Government has recently issued a new ruling, however, relative to the hauling of state fish cars. In the future it will cost us at the rate of 30 cents per mile. Two-thirds of the fish that have been distributed each year were hauled in baggage cars, free of charge, by the various lines, a shipment consisting of one messenger and an average of twenty-five cans of fry. We have not yet received any instructions as to charges for the carrying of fish in baggage cars from the Government. But it looks as if most of the shipments will have to be made in baggage cars, unless we receive a larger appropriation for this purpose. Heretofore, it cost us \$40.00 per thousand miles for the use of the fish car and the conveyance of two passengers. Under the new ruling it will cost us \$300.00 per thousand miles traveled, and with an increase of one cent per mile in railroad fare for each messenger. This will make quite an item in the expense incident to the distribution of fish fry.

The increased cost of labor and materials of all kinds has been a serious handicap to the commission in trying to maintain its usual high standard. Take for example the cost of fish foods. Last year this one item cost \$1700 more than the previous year. The purchasing power of a dollar has fallen so much that it will be necessary to have a substantial increase in our appropriations for operation and maintenance.

We have attempted very little new work at any of the state hatcheries, other than repairing the buildings during the past summer. These buildings one and all are in fairly good condition.

A number of the employees entered military service, which necessitated the supplying of their positions with new men. We found it very difficult to secure suitable men for the messenger service. This service requires much thought and care. This work is probably the most important, as after the state has gone to the expense of hatching fish, it is very necessary that they be carefully distributed. This work is done by men in the messenger service.

THE PERCH LAW

The Commission believes that the 8-inch perch law affecting the waters of Green Bay should be repealed. In these waters great numbers of perch are caught annually by fishermen with fyke and gill nets. Soon after the 8-inch law went into effect, fishermen complained that if the laws were all strictly enforced they would be driven out of business. Pressure from fishermen became so strong that the Commission instituted an investigation, extending its inquiries to the dealers as well as the fishermen. This resulted in finding that not to exceed five per cent of the perch caught in Green Bay reached the 8-inch size.

Because of the war demand for food production and conservation, the Commission decided not to enforce the 8-inch provision of the law, it being clear that to do so would virtually eliminate perch as a food supply.

We did not allow any perch to be shipped out of the state under 8 inches, nor did we allow the fishermen to place any perch on the market of less than 7 inches in length. They were all placed and sold in the home markets of the state.

It is a question with the Commission now whether many perch in the upper end of Green Bay ever reach the 8-inch size as the food conditions are not altogether favorable. Lower down the bay from Little Sturgeon to Washington Island, the fishermen made no complaint about the 8-inch law; in fact, they seemed to be well satisfied with it. The same sentiment prevails among the fishermen on the Lake Michigan side of the peninsula. The perch there seem generally to grow considerably larger than those caught in the upper reaches of Green Bay.

The Conservation Commission has hatched and distributed during the past year some 277,000,000 of fish of various kinds—209,000,000 of these fish were game fish and were distributed in the many lakes and streams of the interior of this state.

There were also some 68,000,000 in round numbers, of lake trout and whitefish fry hatched and deposited in the outlying waters of Lake Superior, Lake Michigan and Green Bay, which fish are for commercial purposes.

To undertake the collection, hatching, and distributing of this large number of fish is quite an undertaking. It is a work that requires great attention from the first spawning of the fish to get the eggs and care for them until the fry are deposited in the lakes and streams. It is a work in which you cannot say, "We will not pay any attention to



TWELVE YELLOW PERCH, TOTAL WEIGHT 16 POUNDS, TAKEN PROM LAKE

it today but will do it tomorrow." Tomorrow may be too late. A man who has charge of the supervising of live fish must be prompt in all details. It is always best to be a little ahead of time, to be on hand to prevent loss in case of any mishap. If anything unfavorable does occur there is no way to make up for it until the year rolls around again.

Little does the public in general know the routine of work and the attention that must be given to the handling of fish in their various stages, to make the work of propagation and distribution a success.

BLACK BASS

Large and small mouth black bass are to be found in nearly all the inland lakes and larger rivers of any size in this state. Bass are a great favorite with the sportsmen and other fishermen on account of the great fight they put up when hooked at the end of 100 feet of line.

Bass are in greater demand for stocking purposes than any other fish that the Commission distributes. For the past twenty-five years I have been advocating a closed season on bass to extend to July 1st, so that the bass would get a chance to spawn, and not be taken from the water at time when they are on the nests. It is a shame that something has not been done in this matter to protect the fish just at a time when the fishing season opens. The spawning season comes at a time when the people most desire to go fishing, during the month of June.

The month of June is the spawning season for bass in this state. It takes twenty days on an average from the time that the eggs are deposited on the nests until the fry rises from the nests and are ready to scatter. The parent bass then leads them off to the weeds and grasses where they can find hiding places from their enemies, before being left to shift for themselves.

Small mouth bass spawn on gravel and sand bars and after depositing her eggs the female remains near, continually fanning the eggs on the nest until they hatch. She protects her nest from the time the eggs are first deposited until the young leave the nest. The fry when hatched, cling to the bottom of the lake and will hide under stones or logs to keep out of sight of their enemies.

The large mouth bass make their nests around a bed of moss, a brush heap or under a log or tree top, on a mud bottom. They very seldom make their nests out in the open like the small mouth bass. The large mouth bass, after depositing her eggs, all unlike the small mouth bass, leaves the nest until about the time for the eggs to hatch. One may go around the shores of a small lake after these bass have spawned and conclude that there was not a bass in the lake, as they have all left the shore for deep water. When it is time for the fry to make their appearance on the nests, the shores will be lined with the male bass who begin looking after the nests. Grass and moss have grown up through many of the nests and it is frequently hard to discover them. When you see a male bass you can make sure there is

a school of small ones in the vicinity. It is most interesting to watch the bass protect their nest at the time that the young are rising from the nest and to examine the many nests and count the number on each nest of good and bad eggs. The largest number of fry that I ever saw rise from one nest was 10,250. In some nests not one egg will be impregnated, while other nests will produce in number from 25 fish up to several thousand.

Bass eggs are very sensitive to temperature. We had some 200 or more nests that the bass had spawned on this past season when a frost came the middle of June and froze ice around the edge of the ponds and lake which caused the water to be chilled and we did not get a single fry from any one of the nests. We have traps made for catching the fry from the ponds at a time when we commence distributing the fry, which we set around the shore of the pond. These the fry run into before we take them to the reservoir for holding them for shipment.

It is not generally known that the small mouth black bass hibernate during the winter months. Not so with the large mouth bass. has been proven by the keeping of the bass breeders in the ponds during the winter months. The closed season for bass should be extended to the first of July to a time when they are through spawning. We have made this recommendation several times but it is very difficult to convince the members of the legislature of the necessity of such a law, as popular opinion seems to favor an open season beginning on Memorial Day. As a substitute for a closed season until July 1st, we recommend that certain portions of lakes containing bass be declared closed to fishing, whereby the same results might be obtained and the public not deprived of the privilege of fishing. On nearly every lake in the state there are bays or muddy marshes where the large mouth bass go to spawn and if the Commission had authority to declare them as reserve waters for the thirty days of June, very few bass would be caught and a future supply of such fish would be assured. Signs could be posted about the lakes in conspicuous places and articles published in local papers advising the public of the closed waters. Such a policy, would in the Commission's estimation, prevent a great many bass from being caught while on the spawning bed, and would be very beneficial to the lake in a future crop of bass.

BROOK TROUT

It is not generally known by the public at large, but what the streams in this state that have brook trout in them today, had an abundance of trout in them in former days before the coming of man; but such was not the case.

All the streams emptying into Lake Superior and the Mississippi River basin with streams flowing into Marinette and Oconto counties were abundant with speckled beauties in the early settlement of the state. All through the southern and central part of the state, brook

trout was not known until the streams were stocked in recent years by the Fish Commission.

The counties of Adams, Waushara, Waupaca, Marathon, Lincoln, Rusk, Oneida, Langlade, Portage and Shawano have proved to have some great trout waters where trout have grown and thrived in abundance from stocking where formerly trout was not known. In fact, there is hardly a stream in any county where brook trout have been planted and where the water was suitable, but the planting has proved a success.

Personally, I do not think that we are getting as good results from the planting of trout fry in the streams today as we did some twenty to thirty years ago. In former days, when the streams were first stocked, there was an abundance of insect life in the water upon which the trout seem to thrive and grow much faster and larger than they have been doing in the past fifteen years. At that time there were more minnows, such as shiners and other small fish that the larger trout fed upon and grew to good size. Then again, there were not the number of fishermen that there are today. With the automobile, the sportsmen can get around to many streams in a day which in former days he could not do. Hence, the number of trout in many of the streams are not as plentiful as in former days from the results of stocking.

A great many people think that trout should not be planted until they are of fingerling size and think that we would get better results from the stocking of streams. In this, I do not agree with them. We know that brook trout is very cannibalistic in the eating of fish and is no respector of varieties which they attack. When fry are planted according to instructions in the small rivulets they have their natural instinct to keep out of harm's way and will seek hiding places from their enemies. On the other hand, if fry are kept in small ponds and fed from the hand of man for several months and then turned loose to seek their food in a stream, they do not know what it is to have an enemy and become an easy prey to the first fish that comes along, having lost their natural instinct to beware of enemies.

To illustrate: Twenty-five years ago, we planted some 800 lake trout two years old and over that would average in weight one pound or more, in Lake Mendota. The next morning, four of these same trout were taken from pickerel that had been speared during the night by a Mr. I. E. Troan and taken to Dunning & Sumner's Drug Store as evidence that they had been eaten by the pickerel. Mr. Dunning at that time was president of the Fish Commission.

CHANGING FOOD CONDITIONS OF THE TROUT FAMILY

The degree of success achieved in planting fish is determined by the conditions of the water in which they are planted. Some lakes and streams are more productive of fish and the life upon which the fish feed than others. The problem with which we are confronted is how can these conditions be maintained. The farmer that sows and reaps without returning anything to the soil, soon has a barren field. We

have been planting fish in streams for years, and at first got good results. The time has arrived when many of our streams cannot support greater numbers of game fish and the question to be solved is what can be done to restore these streams to their former pristine conditions to that they can be stocked to meet the increased demand.

The principal food of large and small trout and which is found in most all spring water fed streams, is a crustacea that adheres and grows on stones on the bed of the streams. The caddis larva is a wormlike creature found in the streams and looks as if it might be encased in bark from the tree or an alder bush and pebbles. Then again, in most all of our spring water holes, where water-cress will grow, there will be found vast numbers of fresh water shrimp found all along the stream clinging to roots, logs or stones as they drift along down the stream and the fish feed upon them.



RAINBOW TROUT CAUGHT IN LAKE MICHIGAN NEAR RACINE, WISCONSIN.
(Weight 11 pounds, 1 oz.)

Brook trout prefer streams that contain hiding places and clear spring water with a maximum temperature of about 60°. In many of the counties of the state intensive farming has caused the removal of brush and trees from the banks of streams, destroying the conditions that provided natural haunts for the fish. Many farmers set aside for pasture that portion of their farms through which the stream flows. Cattle and hogs wade and wallow in the stream, making it roily and unfit for trout, with the consequence that the fish move away or die. After a heavy rainfall, the wash from cultivated fields also makes streams unfit for trout. To farmers and others interested in fish and fish life, it would be a good idea for them to plant willow and tag alder along the stream.

We have one trout stream in this state that in years gone by attracted more sportsmen and men of note than any other. Some thirty

years ago when visiting this stream, we observed that it was bordered by a dense forest of pine. Trees frequently were found fallen across the stream and logs and brush formed pools and ideal hiding places for trout. Several well-to-do sportsmen from nearby cities bought small tracts of land along the stream and built elaborate summer homes, and others built cottages, and in time there got to be quite a settlement along the stream. Practically all of the marketable timber has been cut except the small areas that are privately owned and used as sites for summer homes.

Time came when the sportsmen thought the river ought to be cleared of all brush and logs so they would be able to fish from the bank of the stream and also be more convenient to wade to catch the fish. All those having an interest in the stream got together and raised a sum of money to have the stream cleared of all logs and brush. A man was hired to do the work and the result was not what the sportsmen desired. The condition of the stream was so altered and the former haunts of trout removed until today there is not one trout in the stream where formerly there were twenty. The man who cleaned the stream kept a resort and acted as guide for the accommodation of the many sportsmen who visited the stream each year. Two years ago he made the remark that he had been guilty of ruining his own business and the reputation of the stream by accepting the contract to clean out the river. He had driven the fish away by destroying their hiding places.

Brown Trout

Brown trout, or Lochleven trout, is not native to this country but was introduced some thirty years ago by the U. S. Bureau of Fisheries. Through this Bureau various State Commissions secured limited quantities of eggs for propagating purposes.

The brown trout is a very hardy and gamey fish and grows to a large size. As a table fish its eating qualities are surpassed by none. For a number of years we did not make much of any effort to propagate this particular species as it was reported that the brown trout was cannibalistic and destructive of other fish. Our experience and observations do not bear out the report. They are no more destructive of fish than the brook trout or other species of trout. We have been planting from 100,000 to 500,000 each year for the past twenty-five years; they were mixed and distributed along with the brook trout fry; hence can be found in most all of the streams where brook trout were planted. The brown trout have thrived in many streams and a report has been received of a single fish being caught that weighed seventeen pounds. One fisherman caught three in one day that weighed thirty-six pounds, in the Kinnickinnic river in Pierce county. The Kinnickinnic seems to furnish ideal conditions for this variety of fish and at the present time probably contains more brown trout than any other stream in the state.



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The demand for the brown trout for planting is constantly on the increase, more especially for the streams in the southern half of the state. Some people think that the brook trout is not doing as well in our southern streams as formerly and are ordering brown trout to take their place. To meet the increased demand we have endeavored to increase our stock of breeders; so far this season we have taken over 1,000,000 eggs, the most we have ever taken in one season.

RAINBOW TROUT

Rainbow trout were introduced into Wisconsin about thirty years ago, and many millions have been planted in the streams and inland lakes of the state. In many instances they grow larger in these waters than they were ever known to grow in their former habitat. One weighing 24 pounds was speared in Rusk Lake, Oneida county. Several weighing from sixteen to eighteen pounds each have been taken in the state as reported to the Commission. A four-year old fish weighing eight pounds was caught in Willow river, St. Croix county by the late H. C. Reed, one time secretary of Senator John C. Spooner. The age of the fish was ascertained by looking up the record of the first planting of rainbow trout in Willow river. The fish was caught just four years after the first planting.

Rainbow trout are now found in nearly all the streams of the state from Lake Superior to the Illinois line. They are better adapted to the larger streams than are the speckled trout. They are a gamey fish and furnish excellent sport. The Peshtigo river is one of the best streams in the state for rainbow trout. They do not grow so large here as in some other streams but there are plenty of them. Two, four and six pound fish are the larger sizes caught in the Peshtigo.

Many of the rainbow trout planted in the rivers have gone down stream to Lake Superior, Green Bay and Lake Michigan. As these fish are spring spawners they ascend the rivers from the lakes in the spring for spawning in large numbers. September is the best month in which to catch these fish. A good many sportsmen are of the opinion that in this state the open season for trout should be extended to October 1st so that rainbow trout might be fished for when they take the bait more freely.

Rainbow trout are not cannibals. I have failed to see the first rainbow trout attempt to eat another, and I have been in close touch with them for a great many years.

PIKE EGGS

Of the pike eggs collected by the Conservation Commission, twothirds or more are gathered in the waters of Tomahawk and Kewaguesag Lakes in Oneida county. These lakes connect with the thoroughfare adjacent to the hatchery in the town of Woodruff, which makes it very convenient for the catching of the fish and the delivery of the eggs to the hatchery by the Commission's own boats. From there, the eggs needed for the other sub-stations and hatcheries are shipped to them. The pike fry hatched at the sub-stations in the various parts of the state, can be taken to any lake or river within a very short time by railroad as our shipping facilities are excellent for getting them to their destination at the lakes without any loss of fry.

The stocking of lakes with pike fry is not always satisfactory. Even in lakes where it is known the planting has been successful the catching of them with hook and line is sometimes very slow. What the reason for this is it is not easy to say. In some lakes pike will not take the bait until after night fall. Cases have been known where they did not begin to bite until nearly midnight. At Oshkosh it is not unusual to see hundreds of people fishing in the forepart of the night from docks and bridges within the city limits, using lanterns.



CATCHING WALL-EYED PIKE FOR COLLECTION OF SPAWN.

Pike will make a growth of a pound a year up to five years of age. We have found this to be true in lakes where until planting was done there were no pike, and then noting their growth year by year. There are waters again where pike at ten years of age do not weigh to exceed one and a half pounds. Poor food conditions undoubtedly explain this slow growth.

It has been very interesting, to watch the growth of pike in Tomahawk Lake for the past ten years on this account. This is the lake from which we catch our stock of breeders returning the fish to the waters as soon as freed of their eggs. Female fish, grow on an average much larger than male fish. This last spring we had the largest collection of large fish, held in our dummies waiting for the fish to spawn, that I have ever seen in one collection. Tomahawk Lake is stocked from year to year from the hatchery and the fish are caught in fyke nets so that we are in a position to watch their growth from year to year.

Pike eggs are very sensitive to changes of temperature. We have had a couple of seasons in the past fourteen years in the hatching of pike eggs at the Minocqua hatchery, when on a few nights shortly before the eggs began to hatch the water dropped to a temperature of 56° Fahrenheit. The fish immediately began to die in the eggs. There would be a couple of inches of dead eggs on the top of the water in the hatching jars each morning. The only thing we can do in such a case is to wait for "Old Sol" to warm things up and save as many eggs as possible when the temperature rises.

MUSKELLUNGE

The spring of 1918 was a poor one for the catching of muskellunge for hatching purposes. The muskellunge is the big game fish of the northern lake country and is in great demand on account of the size it obtains and the sport there is in catching it.

At the last session of the legislature, the law was amended making the length of the fish that might be caught, 24 inches. This is much too small to be taken as such a fish will not average more than four or four and one-half pounds in weight. The citizens of Vilas county petitioned the Commission to increase the size of the fish, which we have the power to do, and which was done at a meeting held at Eagle River, to 30 inches in length in Vilas county. This will bring the weight of the fish that may be taken to about six pounds. Nobody wishes to catch a small "muskie" of less than eight to ten pounds in weight.

The number of fish that the Commission catches each year to take the eggs from, will not exceed 150 all told, during the spawning season. Two-thirds of those taken are male fish and the eggs we secure from the female are limited in numbers and are very sensitive to the touch in handling. Great care has to be taken in getting them to the hatchery before they are placed in the hatching jars.

In the early spring the ice goes out from the thoroughfares much earlier than from the lakes and at that time, the "muskie" after being confined under the ice for a long period, seek the first opening in the ice. Thus they become a prey to the settlers who are waiting to get fresh fish. A great many fish are speared just at a time when they should have protection, before the spawning season. This spring, the ice melted out of the thoroughfares much earlier than usual and a big majority of the fish had spawned before our men had arrived on the grounds to catch them. Because of this, we did not get as many eggs as we usually get for propagating purposes.

BIRDS DESTRUCTIVE TO FISH

Sentiment in favor of protection of all kinds of birds has grown during late years, due chiefly to education and emphasis on the economic value of birds. There are three species of birds, however, protected by both state and federal law which should be removed from the pro-



PRIZE MUSKELLUNGE CAUGHT NEAR EAGLE RIVER, WISCONSIN.

tected lists because of their destructive habits. The kingfisher, American bittern, and blue heron during their stay in this region live on fish and during the course of one season consume many thousand pounds. They may be found about our many streams and lakes, the bittern and heron standing in shallow water apparently motionless except for a sudden thrust of the head into the water to add another victim to their already long list. The cranes and blue heron will feed all night long. I know of places where the birds will fly just after dark to our hatchery ponds to feed on fish, and many thousands of fish have thus been taken from our ponds. The kingfisher is the worst pest of the three species about our hatcheries, but the other two are in our opinion more destructive to fish life. We suggest that the state law protecting these birds be repealed. Such action should be taken as the federal law authorized the Secretary of Agriculture to issue permits to kill such birds as destroy property of economic value.

CISCO FISHING IN THE ISLAND LAKES

At the last session of the Legislature, a law was passed allowing the cisco to be caught in a gill net of 100 feet in length. The licensee has to pay fifty cents for a license and must not use more than 100 feet of net and is not allowed to catch more than 100 pounds of fish a day. The season lasts for twenty days during the month of November.

The lakes in the northern half of the state contain an abundance of cisco and it seems like a needless waste to leave them in the water at a time when food products are so high, and when the citizens in the vicinity of the lakes could make use of them, and sell what they could not use to their neighbors.

The fish will average in size all the way from one-half pound to four pounds in weight. In some lakes the fish are much larger than in others. They are variously called cisco, tulebee and whitefish. They all belong to the whitefish family.

One great trouble in the granting of licenses for the catching of the cisco is that it encourages the people to buy nets, which they have on hand at all times to place in the water when convenient and catch game fish at any season of the year. It may be in the long run that we are doing more harm than good in granting permits and it may be wise to have this law repealed, or have the nets turned over to the local wardens to keep when the open season is past.

SILVER BASS

The Commission has not done much heretofore in the propagation of the commoner varieties of fish such as silver bass, crappies, and rock bass. Of late years there has been quite a demand for this class of fish. For some reason there has been no call for perch. This we do not understand as they make a fine pan fish and are suited to most of our waters. I suppose it is because perch are found in most of our lakes. In some lakes they grow much larger than in others.



WALL-EYED PIKE FROM TOMAHAWK LAKE, ONEIDA COUNTY, WISCONSIN

The Commission is thinking of setting aside some of the ponds at the bass hatcheries to see what can be done in the way of breeding silver bass and crappies for distribution.

If the Commisson were not cramped financially there is no reason why we could not be able to get a large number of full grown crappies from the Wolf river and distribute them to the many lakes where there is a call for them. In the future, we will endeavor to do more in this line of work, if funds are available.

LAKE WINNEBAGO AND ITS TRIBUTARIES

The fishing on Lake Winnebago and the Wolf and Fox rivers this past two years, with hook and line, has been the best known for the catching of white bass and wall-eyed pike. There were thousands of these varieties caught with live bait, which is what the local fishermen use. Two years ago, the white bass caught in these waters did not average more than one-half pound in weight. The past two seasons most of the white bass caught seemed to be full grown, and very few of the smaller size were taken.

The pike commenced to take the bait last March and from that time on, great strings were taken during all the spring and summer months and until late in the fall. It pleased the people who lived within reach of the lake territory that they could get a mess of fresh fish without spending much time.

In regard to the rough fish caught with fyke nets in Lake Winnebago waters, the fishermen who are catching these under contract with the state, are making complaint and by the reports of the supervising warden, the complaint is well-founded, that they are not catching fish enough to warrant them continuing in the work, or investing any more money for nets. The class of fish they are allowed to catch and dispose of to the public include eelpouts, suckers, dogfish and sheepshead. These bring very low prices and at times when shipped this season to the commission houses, were unsalable. As there is an abundance of bullheads and crappies in the lakes and rivers and no one pays any attention to the catching of such with hook and line, the fishermen and the citizens in the vicinity of these waters with whom I have talked on the subject, think that they ought to be allowed to catch them with the rough fish in said waters for a couple of years to help reduce the numbers.

I do not think there are as many carp in Lake Winnebago as there were ten years ago. It is the opinion of men who spend most of their time on the waters, that the fish do not come to the surface of the waters in such numbers as in former years.

Catfish and sturgeon appear to be on the increase as they are taken in seasons when fishermen are taking rough fish and returned to the waters.

Hook and line fishing on the whole was fairly good throughout the state. There are a great many lakes where there is an abundance of

game fish but at the same time, it is very hard to get many of them to take the bait. Fishermen who use live bait generally get as many fish in a day's outing as the law allows, that is, if they are fishermen. Others again, who are listless in their fishing and do not know where to go and do not see the necessity; of using fresh bait, will never get many fish. The fellow who is not afraid to make use of fresh bait and is a worker, will always get his quota of fish.

The bait question for the hook and line fishermen is getting to be a serious one, as bait is getting scarce and there are more anglers wanting live bait than can be supplied. People who make a business of furnishing live bait, in some cases now go from 50 to 100 miles for it which costs time and money. Many thousands of dollars are paid out each year to the people of this state who make a business of furnishing live bait. The successful resort owner is the man who keeps his guests well supplied with good bait.

WATER CONDITIONS

One of the vexing problems that we have been unable to solve, which exists at several of our hatcheries, is the great difference in the percentage of eggs that hatch, and the number of fish fry that will live and thrive when the water, to our best knowledge, is most suitable for their production. The point we wish to make can best be illustrated by a concrete example.

We have a small hatchery for hatching pike fry at Spooner, Washburn county, also one at Minocqua, Oneida county, and one thirty miles east, at Eagle river, Vilas county. The water that we use at Spooner is backwater of a river dammed to develop water power. The source of our water supply at Minocqua is the overflow from a chain of lakes that empties into Tomahawk Lake. At Eagle River we obtain the water from the chain of lakes forming the headwaters of the Wisconsin river. The eggs for these hatcheries are secured from the waters near Minocqua, and except to Minocqua, must be transported by rail before being placed in hatching jars. The water supply at our Minocqua hatchery is the same from which the pike are caught to secure the spawn and should be ideal for that particular fish. Experience, however, proves the contrary. We have been able to hatch a much larger percentage of eggs at Spooner and Eagle River than at Minocqua in spite of the fact that the eggs must be transported by rail. After the eggs are hatched the fry do much better in the Spooner and Eagle River waters than they do at Minocqua. We have never suffered any loss of fry after they have been placed in reservoirs where they are held ready for distribution. What there is in the quality of the water we do not know. It is almost unbelievable that there should be such a difference. The only apparent difference in the water is that of color. At Minocqua the water is clear while at Spooner and Eagle River it has an amber or golden tint. We can understand why certain qualities in the water might be detrimental to the growth of fry, but cannot understand why it should effect the percentage of eggs hatched. Similar difficulties are experienced in the hatching and raising of brook trout. Some waters are so much better than others for the propagation of fish. Soft water is much better than hard for all varieties of fish.

A great many fish hatcheries have been located at places not suitable for fish propagation, just to please some friend or politician, not taking into consideration or knowing the requirements of the variety of fish and the qualities of the water that was most suitable for them.

Several brook trout hatcheries that were established many years ago have had to be abandoned in recent years. They were not capable of raising brook trout in numbers that would warrant their continuation, in the propagation of this variety of fish.

THE POLLUTION OF STREAMS

The pollution of streams in Wisconsin has come to be a serious menace to the propagation and protection of fish life. With the many canning factories, paper and pulp mills, tanneries, sulphite mills and other industries pouring their chemical waste into streams, the preservation of fish is a difficult task. One who has not investigated the subject can hardly conceive the terrible destruction this pollution of streams is causing.

What makes the situation more exasperating is the fact that the pollution comes more generally from the big industries that might easily make provision to care for their waste, rather than from the smaller ones.

This Commission has taken up the question of stream pollution with the State Board of Health, and the engineer of that body has devised a plan whereby the waste from industries can be kept from streams. In company with an officer of the State Board of Health the members of this Commission called upon the owners of a number of large industries that were polluting streams and enabled them to realize the injustice that was being done by allowing their waste and refuse to get into streams or lakes.

This Commssion proposes to be more vigilant in the future in protecting the public from the wrong resulting from polluted streams.

RESCUING FISH FROM THE MISSISSIPPI RIVER

Men who know anything about the formation of the Mississippi river bottom lands know it is made up of innumerable small ponds, and sloughs. The fish get into these ponds at the time of high water and then when the water recedes vast numbers of them perish in these ponds. One can hardly understand how it is there are any fish left in the river. There are very few of large breeding fish ever found in any of the small ponds, however, and it may be the instinct of the parent that makes it seek the channel which preserves the stock of

fish in the river. With the number of fishermen who are making a business of catching fish from the river, one would think that even the large breeding fish would have become extinct by this time.

The Commission has been much gratified with the great work that the U. S. Bureau of Fisheries has done on the river in the rescuing of fish, during the past summer and fall. It was very unfortunate for us this past two seasons not to have had funds available for this rescuing work, such as the Bureau of Fisheries is doing. It has always been our contention that the waters of the Mississippi river produced more fish to the square acre than any water in this country.

The Commission is recommending to the legislature that authority be given to use the money received for licenses for fishing in the Mississippi for the rescue of fish from the shallow ponds along the river

ROUGH FISH

The fish of Wisconsin are, by law, divided into two groups, game fish and rough fish. The game fish are those varieties for which a closed season is prescribed, while the rough fish include chubs, dace, suckers, carp, redhorse, sheephead, eelpout, dogfish, garfish, buffalo and lawyers. The species of rough fish, about which most interest is centered is the carp. It is found in many of our inland lakes and streams and in large numbers in Green Bay and of late years has become one of the leading commercial fish.

For a number of years, the state has exercised control of the carp industry in our inland waters. Such fish caught in Green Bay and the Mississippi river was the property of the fishermen upon condition that a license had been secured. In controlling the industry on our inland waters, other means were adopted. Instead of issuing licenses, contracts were made with experienced fishermen, authorizing the use of nets and specifying that the drawing of seines or lifting of nets could only be done under the supervising of an agent appointed by the Conservation Commission. The salary and expense of the supervising warden was borne by the fisherman. The contract further provided that a financial consideration be paid to the state, based on the number of pounds caught or a percentage of the net proceeds of sales. A payment of twenty per cent on net proceeds of sales was considered most satisfactory by both the fishermen and the Commission.

During the year 1916-17 the state's share from the sale of 1,038,915 pounds of fish, principally carp, amounted to \$8,169.88. For the year following, \$16,360.35 was received from the sale of 859,317 pounds. There was a large increase in the amount of revenue derived although there was less fish marketed, the difference being due to the increased market value of the fish and the terms of the contract. Besides the commercial sales of 859,317 pounds of fish marketed there was sold within the state from municipal markets, approximately 700,000 pounds.

Shortly after war was declared with Germany the federal govern-

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ment through its agents instituted a campaign to conserve food, with emphasis on meats, and urged the public to save meats by eating fish, using as their slogan "Save the products of the land—eat more fish, they feed themselves." The response of the people is evidenced in the amount of carp and other rough fish consumed during the period of about five months. Formerly there had been practically no market for carp in Wisconsin. The people of our cities were impressed with the order of the food administration and fully realized the necessity of using substitutes that meats might be sent to our armies and allies.

To Governor Phillip, with his usual foresight, should be given the credit for suggesting that municipal markets be established in all our cities and rough fish be offered for sale at cost. Since then several of the states have taken up the work in a similar manner. The State Council of Defense in cooperation with our Commission decided on a course of action. It sent our circulars to its branch organizations and had published in newspapers that rough fish could be obtained for public sale from the Conservation Commission to retail at approximately five cents per pound. This price was maintained regardless of the market value of the fish elsewhere. The contracts that were made with the fishermen specified that all orders for fish from within the state should be given priority, and a fixed price of 3½ cents per pound established. The retail price of the fish determined by the cost of transportation was seldom above five cents.

To still further encourage using carp as a cheap wholesome food, receipts for preparing the fish were printed and distributed freely. A few of the cities that ordered fish failed to reorder, but generally they maintained the market until weather conditions made it impossible. We have not a complete record of the total sales to each city, but we know from the records of the number of pounds of fish caught that not less than 700,000 pounds were sold within the state. The city of Milwaukee led by far in the amount of sales.

MARKETING OF LAKE TROUT TO THE CITIZENS OF THE STATE

It would be well worth while to educate the people of Wisconsin to eat fish at a time when they can be bought from the state at low prices.

In outlying waters our laws provide a closed season for lake trout and whitefish during the spawning period. During that time this Commission is authorized to catch such fish to obtain spawn for the fish hatcheries. The fish are caught under special permits granted to commercial fishermen who strip the fish of eggs and milt, after which they become property of the fishermen. Most of such catches are sold in Chicago and a large part sent back to cities and villages in Wisconsin and sold in local markets. The price of fish varies with supply and demand but this year the fishermen realized about fourteen cents per pound for lake trout. The fish companies in Chicago reshipped to Wisconsin markets these same fish and charged approximately twenty cents. The transportation of the fish plus the profit of the local

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dealer added still more to the cost of fish, and it is safe to say the ultimate consumer paid not less than twenty-five cents per pound.

It is respectfully suggested that this Commission be vested with authority to fix the price and control the sale of such fish caught during the closed season, and as far as possible dispose of them to the people of Wisconsin direct. Announcements could be made in newspapers and circulars sent to meat markets explaining that the state would furnish them with fish at a fixed price for delivery a week later. The price of the fish once established could be maintained throughout the month and thereby make it possible for the dealers to advertise several days in advance what the fish will sell for. In establishing the price of fish cognizance would be taken of the ruling prices for the previous eleven months and an average taken. This manner of fixing the price would be fair to both the fishermen and the consumer.

The state of Wisconsin each year spends thousands of dollars to maintain the supply of trout and whitefish in the outlying waters and the Commission believes that especially during the closed season the people should have the benefit of the catch. We estimate that about 500,000 pounds of lake trout from Lake Michigan and 50,000 pounds from Lake Superior were caught during the last closed season. The people of Wisconsin should have the benefit of these fine fish and if more are caught than can be disposed of in home markets, the surplus can be shipped to outside points. The consumer should buy the fish at a price allowing just enough profit to pay the necessary expense that the state has been to in furnishing the fish.

THE CLAMMING INDUSTRY

The clamming industry in Wisconsin was in its infancy only twenty years ago when it was started on the Mississippi river in which great beds of the shells of clams were found. Many people along the river went into clamming and made good wages, as the investment in the outfit which was necessary to catch clams in those days did not require on an average over \$50. Factories for making buttons were built at various cities along the river. There clammers found a market for their product, for which they were paid at the rate of \$6.00 per ton on the bank. The operators of the factories had big barges on the river which they kept busily employed in the transportation of shells to the factories.

The time came when, like the wild pigeon, the buffalo and other game, clams became almost extinct. This Commission made an effort to secure the enactment of a law regulating the taking of clams in combination with the state of Minnesota. Minnesota passed the bill which was to become effective in case this state passed a similar bill. Our bill did not pass and the result is that we have no regulations controlling clamming. Clams became so scarce in the Mississippi that the clammers began to look for new territory in this state. Large

beds of clam shells were found suitable for making buttons in the Rock, Fox, Wolf and Wisconsin rivers as far up as Stevens Point. At times there are hundreds of people at work on the several rivers catching clams. The Fox and Wolf rivers for the past two seasons have been like beehives, so numerous and active are the clammers.

During the past two seasons the clammers have received good prices for their product, all the way from \$28.00 to \$35.00 per ton on the bank. Many workers in the business cleaned up a snug little sum in a few months' time.

What this state should have is some regulation of the industry. It might then be able to ascertain what resources it has in clams. In 1917, \$950.00 was received from the sale of nonresident clamming licenses. This year \$3,050 was paid for nonresident clamming licenses. These licenses cost \$50.00 each.

The Commission believes that the residents should pay \$1.00 for a license and each man who takes out a license for catching clams be required to make a report of the number of tons he takes from the waters and the price received for them. The state could then get some idea of what the industry is worth to it and the number of men engaged in the business.

The federal government has long recognized the importance of clams and has been conducting a scientific investigation to provide means, if possible to propagate clams artificially. The discoveries which have been made and the methods pursued are of much interest and the Commission takes the liberty of incorporating in this report, an extract from a bulletin published in 1914 by the Bureau of Fisheries.

MUSSEL PROPAGATION, BY EXPERIMENT AND PRACTICE

(Bulletin of the U.S. Bureau of Fisheries)

In the practical propagation of mussels the Fairport station serves as headquarters for field operations conducted throughout the Mississippi River Basin, including the Mississippi River and its various tributaries. There were in the field at one time from two to six field parties operating near the station or at a distance of several hundred miles, and all parties are organized under the superintendent of fish culture.

While the available personnel and means do not permit of covering the extensive field, the present endeavor is to restrict the operation to certain localities favorable for the work and needing replenishment, and to distribute these localities as widely as practicable through the territory. Hence operations are now conducted in Lake Pepin of Minnesota and Wisconsin, on the Mississippi at Fairport, Iowa, on the Wabash in Indiana, and on the White and Black rivers of Arkansas.

- Each field party is under the direction of a competent head, who may be a permanent or temporary employee, sent out from the Fairport station or from the central office in Washington to work under the direction of the Fairport station. The crews employed in the seining of fishes, inoculating them with glochidia, and liberating them again in the river are made up of local laborers or fishermen temporarily employed.

There is no definite outlay of apparatus required. The chief of the party is provided with compound microscope or a dissecting microscope, an ordinary Coddington magnifier, the usual dissecting instruments, and a field equipment which may consist of seines, fyke nets, tub tanks, buckets, etc. A Government-owned launch and row boats may be employed in the region where the operations are conducted. It is generally convenient to use flat-bottom rowboats of small size, 16 to 24 feet in length, but a launch is also practically necessary in order that more rapid movements can be made from place to place, thus extending the sphere of operations possible for a day's work. In some cases the field parties can find accommodation in towns conveniently located, but in other cases a houseboat must be rented in order that the fishing party may have a place in which to sleep and board.

The methods of propagation are based upon a peculiar feature of the normal course of development of fresh-water mussels. The young fresh-water mussels, with rare exception, when first liberated from the incubation pouches of the parent, must become parasitic upon fish in order to pass through the next stage of their existence. To this end, if the chance offers after liberation, the young mussels or glochidia, as they are called in this stage, attach themselves to the gills, fins, or scales of a fish. The mussels of economic importance attach themselves almost exclusively to the gills. In attaching or biting on the fish a very slight wound seems to be caused, which begins at once to heal over; but in the process of mending the glochidium is overgrown and thus inclosed within the tissues of the fish. The mussel is now actually an internal parasite, in which condition it remains for a period of two weeks, more or less. It is thus conveyed wherever the fish goes, until, when the proper stage of development is reached, it frees itself from the host and falls to the bottom; if through favorable fortune it finds suitable lodgment, it continues its growth to form an adult mussel.

The glochidia are so small that the infection, if not excessive, has no apparent injurious effect upon the fish that serves as host. Investigations by the station have shown that mussels do not attach to fish indiscriminately, but that for each species of mussel there is a limited number of species of fish which may serve as host. Particular instances are mentioned on a later page.

The task of propagation is to bring together suitable fish and the glochidia of mussels. Careful studies of natural and artificial infections show that a moderate sized fish may successfully carry in

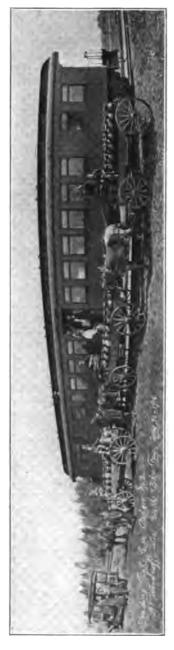
parasitism from 1,000 to 2,000 of the microscopic glochidia, but that under the chance operation of nature few of the glochidia find a lodgment upon the proper fish or upon any fish.

During the last fiscal year, in round numbers, 344,000,000 glochidia were liberated in parasitic condition, 208,000 fish being employed in the operations. A considerable proportion of these glochidia undoubtedly fall upon unfavorable ground or from other causes fail of reaching maturity. However, it is the large number which can be infected and liberated at small expense that justifies a confidence in the accomplishment of commensurate benefits. The average cost per 1,000 glochidia artificially infected in the fiscal year 1915 was 2.7 cents, inclusive of overhead expenses.

Methods of Propagation. The operation of infecting the fish with glochidia is a very simple one, though the methods may vary considerably with each party. Essentially the method is as follows:

- (1) The first step is to secure a number of gravid mussels in order to obtain a supply of glochidia. Generally this can be accomplished by visiting the beds where the mussel fishermen are engaged in work, looking over the catch, and picking the desired number of gravid females, for which a small sum may be paid.
- (2) These mussels are then opened, the marsupial passages are cut out, placed in a pan of water, where they may be opened with scissors or scalpel and the glochidias squeezed out in the water. The glochidia are taken up with a suitable pipette and placed in a small container, such as a glass or can. Usually this operation is delayed until the fish have been obtained.
- (3) It is now necessary to secure as many fish as possible by means of seine or nets, and the species of fish must be appropriate for the species of mussel to be propagated. After the fish are transferred from the seine to tubs or tanks, and when a suitable number of fish are in the tanks, overcrowding being avoided, a lot of glochidia are thrown into the water. There is no definite rule as to the number of glochidia to be used with any number of fish, but the person in charge is guided by his experience with due regard to the temperature of water, the number and size of fish, and the activity of the glochidia. The fish may remain exposed to the glochidia for a period of 5 to 20 minutes. From time to time a specimen of fish is taken by hand, or with a small hand net, and the gills examined to ascertain if a sufficient degree of infection has been obtained. When, in the judgment of the operator, the fish show the optimum degree of infection they are ready for liberation.
- (4) Using buckets or small nets, the fish are transferred from the tank back into the river or the entire tub may be turned over into the river. This concludes the operation of infection as ordinarily carried on in a practical way.

5-C. C.



LOADING STATE FISH CAR AT WOODRUFF, WISCONSIN. (Distributing Pike Fry)

DISTRIBUTION OF FISH.

·Fish for stocking public waters are distributed to applicant's railway station free of charge. Anyone desiring fish for this purpose should write to the Conservation Commission at Madison for application blanks. These blanks are then filled out by the applicant and after stating the varieties of fish desired and describing the water to be stocked, returned to the department.

When the fry are ready for distribution the office at Madison notifies the applicant by letter of the hour, day and date that the fish are to arrive at his railway station, enclosing a card which the applicant must fill in and sign saying he will be on hand to receive the fish at the time specified, that he will see that the fry are taken to the stream and liberated according to directions in the circular letter and that he will have the cans in which the fry are shipped returned to the depot at once. The cans are needed for other shipments. Applicants must make it a point to be at the railway station upon arrival of the train and take the fish promptly to the lake or stream as soon as possible.

Brook and brown trout fry should be planted in small spring rivulet feeders of the main stream, as the temperature of the water will be about the same as the fry are accustomed to at the hatchery. In these small spring rivulets there will be very few varieties of other fish to prey upon the fry.

Bass and pike fry should be planted in and around a weed bed so the little fellows will find a place to hide from their enemies.

Before liberating the fish the can's should be placed in the water, allowing the water in the cans to cool off by dipping some of the lake or spring water into the can, according to the variety of fish, and letting it run out. 'Do this until the temperature of the water in the can is the same as the water you intend to plant the fish in.

ROD AND GUN CLUBS.

Before closing our report, we wish to express our appreciation to the state organization and local organizations for the protection and conservation of fish and game, for the spirit of cooperation that has been manifested throughout all our dealings. In allotting shipments of fish to different parts of the state we have exercised our best judgment and have aimed to stock waters that would produce fish without favoring one locality over another. The various organizations have been of great assistance in providing men and conveyances to carry fish fry from trains to waters in which they were planted and we desire to emphasize our thanks and gratitude for that help.

THANKS TO RAILROAD EMPLOYEES.

The Commission wishes to express its thanks at this time for the valuable service which several railroad employees of this state have rendered to us in the movement of the fish car "Badger", and the transportation of the many thousands of fish cans in baggage cars in the distribution of fish throughout the state. The courtesy and helpfulness of railroad men have been very pleasing to the Commission.

IN CONCLUSION.

In conclusion, we wish to state that we have endeavored to keep informed on subjects relating to fish culture as presented by authorities throughout the country. Experiments are being made continually and we have been watching results in the hopes of learning new methods of fish propagation, to aid in bringing our hatcheries to a higher state of efficiency. To secure the best results requires a personal interest and application to the smallest detail on the part of all employees. It is gratifying to report that such conditions prevail, and we feel that the Commission's success in a large measure was secured through the perseverance and untiring efforts of the members of the staff.



INTERIOR VIEW OF STATE HATCHERY AT OSHKOSH.

(Hatching Pike Eggs.)

VALUE OF FISH CAUGHT AND SOLD FROM OUTLYING WATERS

1916		
	lbs.	value
Whitefish	151,870	\$16,552 46
Lake trout	3,781,115	365,724 59
Bluefin	734,811	23,175 36
Chubs	2.418.941	124,590 77
Herring	5,830,050	111,385 34
Pike	153,423	17.247 31
Bass	909	127 95
Perch	1,959,940	74,474 46
Rough Fish	1,958,907	61,199 53
	16,989,966	\$794,504 77
1917		
	lbs.	value
Whitefish	162,499	\$23,660 45
Lake trout	4,180,119	516,690 20
Bluefin	1,561,006	65,157 91
Chubs	3,137,418	205,593 85
Herring	7,240,039	256,691 49
Pike	133.581	18,386 61
Perch	1,649,122	86,886 61
Rough Fish	1,744,829	71,899 65
•	19,808,613	\$1,244,768 68



WILD FLOWERS. PENINSULAR PARK.

SUMMARY OF OUTPUT OF HATCHERIES

1917

Madison Hatchery: Brook trout, advanced fry Rainbow trout, advanced fry Rainbow trout, inger- ling	1,464,000 1,972,000 8,000	Sheboygan Hatchery: Lake trout fry Whitefish fry Chub fry	18,286,000 3,300,000 2,743,125 24,329,125
Bayfield Hatchery: Brook trout, advanced	3,444,000	Spooner Hatchery: Pike fry	22,050,000
Rainbow trout, a d- vanced fry Brook trout, fingerling Rainbow trout, finger- ling Lake trout fry	2,771,000 669,200 24,400 33,450 11,527,625	Minoequa Hatchery: Pike fry Black bass fry Muskellunge fry Pickerel fry Lake trout fry	31,250,000 621,000 2,250,000 240,000 1,365,000
	15,025,695	=	35,726,000
Wild Rose Hatchery: Brook trout, advanced fry Brown trout, advanced fry Rainbow trout, ad-	162,600 48,000	Oshkosh Hatchery: Pike fry	32,150,000
vanced fry	1,707,000	Eagle River Hatchery: Pike fry	10,800,000
Delafield Hatchery: Pike fry Black bass, fingerling	14,900,000 231,050	State Fair Exhibit:	330
	15,131,050	Tenney Park Hatchery:	14,520,000
Sturgeon Bay Hatchery: Lake troutBluefin fry	16,400,000 400,000	Neenah Station: White bass, fingerling. Perch, fingerling	33,630 18,810 52,440
=	16.800,000	Total	

RECAPITULATION BY HATCHERIES

·	
Madison Hatchery	3,444,000
Bayfield Hatchery	15,025,675
Oshkosh Hatchery	32,150,000
Minocqua Hatchery	35,726,000
Delafield Hatchery	15.131.050
Wild Rose Hatchery	1,917,600
Sheboygan Hatchery	24,329,125
Sturgeon Bay Hatchery	16,800,000
Spooner Hatchery	22,050,000
Eagle River Hatchery	10,800,000
Tenney Park Hatchery	14.520.000
Neenah station	52,440
State Fair exhibit	330
Total	191.946.220

DISTRIBUTION BY COUNTIES

1917

County	Brook trout ad vanced fry	Rainbow Frout advanced fry	Brook trout finger- ling	Rainbow trout finger- ling	Wall-eyed pike fry	Black bass fry	Black bass finger- ling	Perch finger- ling
Adams	25,600	28,900					8,000	
Ashland	138,200	139,800		! 	2,172,000		2,250	
Barron Bayfield	55,800	86,400	2,000	4 000	1,188,000	31,500		
Brown	566,400 3,600	431,800 4,500	2,000	4,800	100,000	31,300		
Buffalo		13,600				9,000		
Burnett	84,200	41,900		¦	918,000	9,000		
Calumet	14,000	8,500			(RA).UA)			1
Chippewa Clark	61,200 63,000	67,000 54,000	800	600	800,000		6,000	1,200
Columbia	52,000	61,200			1,812,000			
Crawford						• • • • • • • • • • • • • • • • • • •		
Dane Dodge		71,400	400		6,378,000		18,000	400
Door			16,000	i			1	
Douglas	124,200	131,400		4,800	2,250,000	24,000		
Dunn	102,600	18,000			500,000			
Eau Claire	96,400 41,600							
Fond du Lac					2,200,000		8,000	2,400
Porest	82,800	89,400	 	4,800	1,842,000	9,000	 ••••••	
Grant	30,000	91,800				l .	l. 	[
Green	20,000							<u> </u>
Green Lake	18,000 44,800	4,500 11,900	2,000				9,000	1,200
Iron	95,400	21.600			2,412,000	33,000	 	
Jackson	106,200	85,000	4,000	4,000	408,000		4,500	
Jefferson	8,000	20,400			933,000		2,250	
Juneau	40,800	42,500			840,000			
Kenosha	· · · · · · · · · · ·						7,500	3,600
Kewaunee	43,200	40,500						
La Crosse Langlade	28,000 40,400	105,400	2,000	2,400	800,000 2,212,000	33,000		
Lineoln	74,400		 		1,728,000	33,000	 	
Manitowoe	21,600	42,000	! ' .		1,652,000	15,000	3,750	1,200
Marathon :	105,600	57,000		1	504,000			
Marinette		278,800			2,510,000			
Marquette	11,200			4,800	100,000 286,000			1,200
			1		!	1	1	
Monroe	189,200	127,500	2,000	2,400	600,000			
Oeonto	32,400	49,500	4.000		2,750,000	190 000		720
Outagamie		104,400				132,000		120
Ozaukee		16,000			\ 	3,000	1,500	1,200
Pepin		 						
Pierce		130,900		1			[
	34,200	77,400	1		1 1 0774 000	1	1	
Polk Portage	62,000	45,000			1,674,000 1,972,000 2,550,000			

DISTRIBUTION BY COUNTIES.—Continued.

1917.

County	Brook trout ad- vanced fry	Rainbow trout ad- vanced fry	Brook trout finger- ling	Rainbow trout finger- ling	Wall-eyed pike fry	Black bass fry	Black bass finger- ling	Perch finger- ling
Racine							8,250	3,600
Richland		59.500		4,800	2,098,000	6,000	10,500	2.40
Rock		10,200				0,000	10,500	2,100
		126,000			936,000 366,000	6.000	4.500	
St. Croix	106,200	106,800			300,000	0,000	1,000	
Sauk	42,000	27.200	ļ		476,000			
Sawyer	50,400	65,700			1,872,000			
Shawano	162,000	182,000			1.672.000	30,000		
Sheboygan	4,000	102,000			646,000			
Paylor		24.000			1,900,000		2,250	
Lujio i	21,000	24,000			1,800,000		2,200	
Trempealeau	85.600	194,800	2 000		532,000	l	1,500	1,800
Vernon		52,700	2,000		002,000		2,000	2,00
Vilas	57,600	79.200			11.512.000	189.000		
Walworth	32,000				2,800,000	100,000		
Washburn	90,000	47,000			9,387,000	24,000		
		1.,,,,,,,,			0,001,000	23,000		
Washington	6.009	4.500	1	l	5.690.000		21.000	5.290
Waukesha	48,000	44,200			5,690,000	115,500		4,200
Waupaca	62,000	78,000			1,992,000	12,000		1,200
Waushara	244,000	345,000			100,000			
Wood	48,000	56,800			1,400,000			
Total	4 400 990	4 941 100						
I Otal	2,200,300	4,841,100	39,200	33,400	117,900,000	736,500	115,500	45,04



A FINE LOOKOUT. ISLAND IN THE DISTANCE.

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NUMBER OF FISH DISTRIBUTED FROM HATCHERIES

1918

Shebeygam Hatchery: Lake trout fry Whitefish fry	17,833,000 18,600,000 36,433,000	Delafield Hatchery: Pike fry	32,650,000 498,000 16,200 3,500 1,300
Bayfield Hatchery: Lake trout fry Brook trout fry Rainbow trout Rainbow trout, finger-	14,550,000 2,255,600 605,000	Sturgeon Bay Hatchery: Lake trout fry	14,550,000
ling	28,565 23,250 17,462,415	Minocqua Hatchery: Pike fry Pickerel fry Muskellunge fry	42,950,000 160,000 140,000
Madison Hatchery: Brook trout fry Rainbow trout fry	620,000 2,445.750	Spooner Hatchery:	43,250,000
=	3,065,750	Oshkosh Hatchery: Pike fry	, , , , , ,
Wild Rose Hatchery: Brook trout fry Rainbow trout fry	210,600 1,365,000	Random Lake: Lake trout fry Elkhart Lake: Lake trout fry	40,000 40,000
. =	1,575,600	Crystal Lake: Lake trout fry Lake Allen:	50,000
Eagle River Hatchery:	35,950,000	Crappies planted	10,800

1918

RECAPITULATION BY HATCHERIES

Madison Hatchery	3,065,750
Bayfield Hatchery	17,462,415
Oshkosh Hatchery	52,200,000
Minocqua Hatchery	48,250,000
Delafield Hatchery	33,167,000
Wild Rose Hatchery	1,575,600
Sheboygan Hatchery	36,433,000
Sturgeon Bay Hatchery	14,550,000
Spooner Hatchery	34,000,000
Eagle River Hatchery	35,9 50,000
Random Lake	40,000
Elkhart Lake	40,000
Crystal Take	50,000
Lake Allen	10,800
m - 1	

DISTRIBUTION BY COUNTIES

1918

County	Rainbow trout	Brook trout	Wall-eyed pike	Black bass
Adams	47,250	27,200	800,000	
Ashland	63,000	50,000	8,400,000	
Barron	63,000 78,750	57,600	5,800,000	1
Bayfield	162,000	176,400	5,000,000	750
Buffalo	56,250	28,800		
Burnett		24000	2,600,000	8,750
Chippewa Clark	63,000 92,250	10,800	2,550,000 1,600,000	7,500
	•			7,500
Columbia	90,000 58,500	24,000	650,000 150,000	
Dane	126,000	75,600	12,400,000	54,250
Dodge	6,750	38,000	4,450,000	12,500
Door	•	39,600	600,000	
Douglas	279,000	25,200	5,600,000	
Dunn	76,500	10,800	2,450,000	
Eau Claire	49,500		600,000	
Florence	47,250 141,750		1,300,000	1,500
Fond du Lac	141,750	68,800	2,200,000	10,000
Forest		50,400	1,100,000	
Grant	155,250	77,400	800,000	
Green			<u></u>	
Green Lake		16.000	1,950,000	
Iowa	83,250	27,000		
Iron	27,000	104,400	1 + 6,000,000 400,000	6,250
Jefferson	27,000	7,200	2.800,000	31,250
Juneau	33,750	55,600	2,300,000	13.750
Kenosha			1,800,000	36,250
Kewaunee	36,000	36,000	600,000	
La Orosse	24,750	52,900	1,200,000	
Lafayette		72,000		
Langlade	96,750	54,000	1,300,000	
Lincoln	85,500	72,000	2,400,000	
Manitowoc	99,000		400,000	
Marinette	200,250	72,000 212,000	1,800,000 2,000,000	
Marquette	24,750	37,250	2,000,000	
Milwaukee	21,100	37,200		
Monroe	117,000	112,200	600,000	5,000
Deonto	184,500	90,000	1,950,000	
Oneida	54,000	46,200	18,600,000	
Outagamie			3,000,000	
Ozaukee	6,750	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	
Pepin Pierce	130,500	54,000		
Polk	100,000	23,400	2,800,000	
Portage	54,000	10,800	1,400,000	3,750
Price	211,500	10,000	8,650,000	
Racine			1,800,000	20,000
Richland	54,000	10,800		2,500
Rock		3,600	4,450,000	
Rusk	45,000	93,600	1,500,600	[
St. Croix	186,750	18,000	3,250,000	1

DISTRIBUTION BY COUNTIES.—Continued.

1918.

County	Rainbow trout	Brook trout	Wall-eyed pike	Black bass
Sauk Sawyer	155,250	89,600 32,400	2,150,000 8,150,000	21,250
Shawano	139,500	266,400	1.800.000	
Sheboygan			1,000,000	20,000
l'aylor	•••••		1,500,000	
Frempealeau	139,500	32,400	1,200,000	
Vernon	175,500	75,600		
Vilas	186,750	45,000	27,500,000	1
Walworth		36,800	8,150,000	46,250
Washburn			8,700,000	1,500
Washington		14.400	1,800,000	31,250
Waukesha	42,750	57,800	8,950,000	122,500
Waupaca	49,500	50,400	1.950,000	1
Waushara	96,750	178,200	1,250,000	1
Winnebago			15,000,000	
Wood	31,500	44,800	1,000,000	



EAGLE TOWER. EIGHTY FEET TO PLATFORM AND NEAR EDGE OF EAGLE CLIFF.

THE GENERAL ROUTINE OF A TROUT HATCHERY

BY

R. L. RIPPLE.

Where can there be a line of work more fascinating, or less monotonous as a daily vocation than that found in a brook and lake trout hatchery, where many millions of both varieties are handled every year? The trout hatchery is mentioned in this instance in preference to those hatcheries where other varieties of fish are handled, because the breeders are reared from infancy and kept in the ponds the year round, and must be fed and cared for and kept in a good condition. The fertility of the eggs and the vitality of the little fish which result from the spawning season each year, depend on the manner in which the adult trout have been fed and otherwise cared for.

The spawning is the fisherman's harvest, the result of a year's careful and painstaking work is at hand. Perhaps during the year there are many trials and worries, but the condition of the fish, as they are removed from the ponds to the spawning races shows that all is well.

However, strive as the hatchery man will to prevent it, there is always a certain loss of breeders in the stock fish ponds that is put down as unaccountable. We count each year, one by one at spawning time, all the fish put into the ponds. We keep an accurate account of all dead fish removed from each pond during the year, but still there is always a shortage of fish in the ponds. Fish have many enemies such as the blue heron, muskrat and kingfisher. The blue heron is one of the greatest consumers of fish that we have to contend with, as it does its work at night and I have had a very good reason to believe that the muskrat, that great vegetarian, will gorge on a fish when he wants a change. There is a large loss of trout and trout fry every year from the ponds.

Our station at Bayfield has a capacity of about twenty double hatching troughs, eleven boxes long, twenty-two boxes to the double trough, each box holding seven trays at two quarts per tray. When the hatchery is filled with its quota of lake trout, brook trout and brown trout eggs, it means many millions. Only those who have the work in charge can realize what effort it takes to fill these many stations, especially in the case of lake trout, as they must be netted in the Great Lakes by the commercial fishermen in the late fall. Only one who has

experience in the work can tell what a fight with the elements and unfavorable conditions is encountered in bringing home each fall this harvest of spawn.

The spawning season over, the responsibilities grow heavy on the hatchery men. Millions of fishes lives are contained in those eggs. The running water is passed over them, and must be kept passing. The ten to twenty-five per cent of infertile eggs must be removed as they begin to decay. Instead of the time-worn plan of picking them out with tweezers by hand, we use the more modern method, the brine box. In this the trays are placed, several at a time the brine solution allowing the bad eggs, which are lighter, to come to the top, where they are scraped off with a small net. Two men, in the same time, now do what it formerly took eight or ten men to do.

For 110 days, on the average, these millions of eggs must remain on the hatchery trays, bringing the hatching season along into March or the latter part of February, in our locality. When the lake trout fry are ready, being some six weeks old, they are taken out in boats and planted on the reefs and spawning beds, where they would naturally hatch.

The malions of brook and other trout fry are placed in the various feeding tanks and rearing ponds. When shipping time is at hand, the tanks are full of fry, taking their food six times a day, ready to go out into the streams, and it is with much rush of cans and men, etc., that they are started out on life's journey. Every outgoing baggage car must take its shipment or shipments of trout. Not only the baggage cars do this, but also the commodious State Fish car "Badger", which carries 200 of the ten-gallon shipping cans at a trip. Each can contains the proper amount of fry according to distance it is to travel, and has a chunk of ice on the cover to drip and keep the water at the right temperature in the can below.

The fish messengers are sent out with their allotted cans of fry, holding them over perhaps at some junction, or, through some delay, holding up maybe a day at the railway station until the fish are delivered to the applicants; or they may have orders to plant the fish in the headwaters of a stream as soon as they can reach there. Seldom indeed does a complaint come in that the fish were not planted in good condition.

Every can carried in a given shipment contains the same number of fry or fingerlings. We measure all our fry by dry measure at times of shipping, by means of small screen-bottom dippers or strainers, each holding a certain number of fry or fingerlings at different ages. I know of no method more accurate or more easily operated than this for measuring the fish put into each can.

As the hatchery tanks of fry are thinned out through shipping they are filled again from the hatching troughs with those that are coming on daily to the shipping age and size. They do not hatch all at once nor reach the shipping condition at the same time.



GERMAN BROWN TROUT CAUGHT IN WAUSHARA COUNTY, WISCONSIN, WEIGHT 8%, POUNDS.

The several hundred thousand fry to be kept for fall shipment are now removed to the outside rearing ponds, where they will have more room, and the feeding, from six times a day, is cut gradually to twice a day.

The feeder is very careful that the fry all get some of the food, scattering the little particles of meat or strained "plucks" over the whole surface. He knows many anxious moments and days until all are feeding well and they start to grow rapidly. If he can see no dead ones on the clean gravel bottom, and they work to the head of the pond and fight the current, even the fish hatchery man feels some little joy in life.

The rearing ponds are small in size, many of them being almost square, while others are oblong. We find, however, that the most satisfactory ponds are those about 8 feet wide, and from 30 to 50 feet in length, with depth of 18 inches to 2 feet of water. If one can arrange, as we are able to at Bayfield, to have the water fall a foot or more into each pond, it will help to aerate the water and also it creates a natural condition much appreciated by the fish. These long and rather shallow ponds give the desired current. They are also more easily covered with shades made of two by fours, in the form of gable-roof frames over which building paper or tar paper is stretched. We formerly did not use these, as we have considerable natural shade from trees, but we were greatly bothered with algae in the water. The shades do way with this trouble, giving the fish all the available room in the ponds and making it more agreeable when the time comes for removing them for sorting or shipping. Formerly, this green "moss" would be seined in with the fish, getting into their gills and causing no small loss.

Nothing can be more ideal for a bottom to these ponds than a layer of clean gravel that can be raked over and over when cleaning, allowing the water to work through it and making for more sanitary conditions.

We have at the Bayfield hatchery, now nearing completion, six fingerlings or fry ponds, each 8 feet wide, 50 feet long and 40 inches deep, and the water will fall about eighteen inches into each pond. These are being built along our Birch Run Springs stream, among the densest of natural shade. It is an ideal situation. We have tested the water for several years past, because we trout men know only too well that fine looking water, clear and beautiful, does not always assure success. The Birch Run water is the softest in use at any of our trout hatcheries.

Our Wild Rose Hatchery has the most beautiful water in abundance, natural shade, plenty of fall, sandy, clean locality, where the trout streams are the best in the state for fishing, where there could hardly be a doubt left as to its suitability for the propagation of trout, yet here we have met with conditions unfavorable to an extent undreamed of. If we can get the trout past the stage of absorbing the yolk sac, our trouble is past. The eggs that are taken there annually—some two

to three millions—are shipped to the Bayfield hatchery, where they hatch into the strongest of fry and we have no losses in the fry stage.

The man with the feed pail and dipper, the man who selects the livers and plucks, the man that knows how to spread the feed and do a thousand other things properly, is truly the man responsible for the results, as it is with a successful stock raiser. For months and years he stands guard over these things and he may know little else and care less. It is confining work, but still very fascinating.

The fry are fed five or six times a day, at first, in the hatchery vats, with very finely ground food composed of one-half liver and one-half sheep plucks. We find the plucks an excellent food, because the fine particles float, giving the little fellows plenty of time to get it, whereas the liver will settle quickly to the bottom. However, the fry that have learned how to feed take it before it reaches the bottom. This finely ground food must all pass through a sieve before being mixed with the water for feeding, to make sure that there will be no pieces large enough to harm the fry. During the five or six weeks they have been in the hatchery fry troughs, they have been absorbing nourishment from the natural food sac. They are eager now for a change of diet, and the little particles of liver and plucks are taken eagerly. It is interesting to see them retain their places at the headwaters, where the current is swift, and work for the food. All these things work into a trout man's system and become a part of him.

Some of these little fingerlings are now growing faster than others and some of them are destined to be, at maturity, much larger than others, of the same age. These larger ones must be separated from the others, or else there will be a tremendous loss during the late summer. for the large devour the small, especially among the brook trout. Those who maintain that the rainbows are eternally eating up all the brook trout are, I believe mistaken to a great extent. We all know the rainbow is a very much hardier fish in suitable waters. We know it stands more abuse and is not subject to the copepod parasite that yearly carries off quite a number of our brook trout of two years of age and over in the wildest of streams, as well as in hatchery ponds. We do not remove the rainbow fry to sort, because we have not had any great loss through cannibalism, though there is just as much irregularity in size as among the brook trout at a given age. There is, however, one feature against the rainbow, in comparison with the brook trout, in that we find on the average a larger number of infertile eggs.

A few hundred thousand of these little beauties in a small space make a sight to behold, rolling to the surface to feed and sparkling in the sunlight with their little small red fins and tails. The water fairly cracks as those little bodies hit the surface in masses.

The large breeders in the ponds will follow the feeder and his pail around the ponds and even come to the landing place and take food from his hand. One may see thousands of these trout at sunset jumping for flies, sometimes leaving the water three to five feet. To witness all this is living.

Allow me to add in conclusion that we have at Bayfield one of the finest equipped hatcheries in this country, in ponds, in buildings, in water and in grounds that compare with the best kept parks in the cities, and we are proud of our work.



A 600D STAND OF SECOND GROWTH NORWAY PINE. PENINSULAR PARK. $6-{}^{1}\mathrm{C}.$ C.



BAY VIEW. PENINSULAR PARK.



ONE OF THE MANY CHARMING FOOTPATHS IN PENINSULAR PARK.

WISCONSIN'S PARK SYSTEM

Although Wisconsin was not the first state to institute a state park system its first effort in that direction antedated the establishment of parks in a majority of the states. In 1878 the Legislature set apart about fifty thousand acres owned by it in the lake region in what are now Iron and Vilas counties as a state park and it was provided that "no authority should be given to any one to cut down or destroy any timber on such lands". For nineteen years this land was preserved in its virgin state, but the 1897 Legislature repealed the law of its predecessor of 1878 and sold 32,000 acres.

The present state park system really dates from 1895 when a few public-spirited citizens of vision secured the enactment of a law authorizing the governor to proceed to acquire 250 acres along the St. Croix river which being purchased constitutes, with a similar tract on the other side of the river in the state of Minnesota and purchased by the latter state, the Inter-State Park. This park includes the picturesque gorge through which the St. Croix river runs at that place. The appointment of commissions by the governor authorized by the Legislature of 1895, to examine the tract and make the purchase made practicable the establishment of the park system as we have it now.

Wisconsin has spent in the purchase of land for park purposes, to date, \$291,571.23 and has now six parks each one of which has distinct features of attractiveness. These parks are, Devil's Lake Park, Peninsular Park, Inter-State Park, Marquette Park, Brule Park and Cushing Park. These parks were mainly chosen as were the system of National parks, to preserve for all time to the public certain features of scenic beauty or grandeur and forest growths and portions of lakes or rivers for playgrounds for the present and future generations. Wisconsin parks are in no sense rivals of the great National parks but it is to be claimed for them that their selection and maintenance have been carried out along intelligent lines and that they do not represent merely a transient sentiment for scenic beauty or unique natural formations of country. In the very nature of the case the generations to come in Wisconsin will secure greater benefits from our parks than can the present generations, but we may take pride in the fact that this generation had the vision which prompted it to preserve for those to come, beauty spots and playgrounds that will for all times minister to their love of outdoor life and make living more useful and enjoyable. Wisconsin people may justly therefore find pride and gratification in recalling what they have done for their children and their children's children.

PENINSULAR PARK.

BY

A. E. DOOLITTLE.

This largest of state parks contains nearly 4,000 acres of which about 2,800 acres is timber. It is located in the Door county peninsula between Fish Creek and Ephriam. It is preeminently the forest park of the system and its fine stand of white and red pine, hemlock, balsam and hardwoods, including beech give to it a most varied attractiveness. Each year sees a marked increase in the number of visitors to this park; especially is it becoming a favorite point for automobile tourists. It is reached by motor stage from Sturgeon Bay, or by boat from Marinette. Many come from the lower parts by steamer lines from Chicago and Milwaukee. By whatever means visitors reach the park, once here there are attractions to meet the desires of all lovers of outdoor life. Good automobile roads, trails for the pedestrians, cabins for visitors who desire to remain a while, camping privileges, picnic grounds and golf links offer a variety to meet any taste.

In these days of the automobile good roads are a necessary factor of park improvement. The roads through this park have been so constantly travelled during the last year, that repair is necessary and will be made. Many stretches of this road, the surface of which was only a few inches in thickness has been entirely worn off, leaving the road bed proper in an uneven surface of sharp pointed limestone rocks, so constant was the travel over them this season.

The early plans of two years ago called for substantial road repair and new roads to be built. Previously a considerable amount of work was done in locating the driveways, in the clearing of the timber and brush ready for the taking out of the stumps. War conditions have interfered somewhat with the road building program law of two years ago, nevertheless some beautiful scenic driveways have been opened and still others are in contemplation.

Mention ought to be made of The Eagle Cliff Drive which was made ready for the grading, and graded, and it is now a good and substantial driveway to Eagle Cliffs and Eagle Tower. In addition a number of loads of gravel were hauled and dumped on low spots on the other roads of the Park.

A considerable amount of gravel will be necessary to make the road of the park smooth, as some of the roads at present are very rough. This with a top mixture of clay will make a very substantial road. With the purchase of two heavy wagons and a tractor this work could be done with a minimum of cost, as the hauling by team is costly, on account of the length of the haul. Further repair work during the past two years consisted in the trimming of some of the main drive-

ways. Some were not trimmed because to have done so would have destroyed the scenic effect.

There are twelve miles of trails in this park. About four miles of these were old logging and "tote" roads of the lumbering days. These in particular are now all beaten paths that furnish excellent walks about the Park. Much work is however necessary to keep these walks in good condition, as superfluous growths are constantly crowding upon them. These paths are very necessary as they furnish the only possible way for people to see many of the most beautiful of the forest growths and the flowers.

The fishermen's houses remaining near the beach after the purchase of the park lands have been repaired and made habitable. While this has necessitated a small amount of expenditure, there is a demand for these houses, justifying the amount expended. A nominal rental fee is charged for the use of these houses but the amount thus far has not covered the expense of the furnishing; nevertheless this has been the means of opening up a source of pleasure not possible otherwise. Some of the amount collected as rental was used in supplying cook stoves, tables, beds, springs, mattresses, for the comforts of the public using these buildings. The rentals for the following years will be used to reimburse the state for amounts expended during the past two years.

Camping privileges have not been used to the extent that was expected though those who have camped here have spoken enthusiastically of the pleasures thus enjoyed. One reason that more people do not come with camping outfits may be attributed to the poor docking facilities. During the past two years much damage has been done to the docks by the ice of Green Bay. While pleasure boats were common visitors a few years ago, they very seldom stop now, because of the difficulty in docking. Some campers come with cars and equipped with means of camping. Plans of the Conservation Commission contemplate the construction of buildings large enough to back a car into with room at the sides for camping and also some substantial docks.

Some improvement has been made on the grounds at Eagle Cliff, and other places to accommodate picnic parties have been put in shape. These are provided with tables and benches and it is no uncommon sight to see a number of families at a time enjoying the use of these picnic grounds and facilities. The patches of wild raspberries and strawberries furnish another one of the picnic enjoyments of the park.

When the park was under the State Board of Forestry the present golf links were opened. While these links have not been extensively utilized, there is possibility of their more extensive use in the future. A little work each year has been necessary to keep the grass cut, and in condition for the use of players. The contour of the ground for golfing is ideal, and it is proposed to expend a small sum each year in the hope that some enthusiastic golf player will take the initiative in organizing a golf club.

The plans for Peninsular Park, for the planting of certain portions of the park with seedling pine and certain cutting of the mature tim-



ENTRANCE TO PENINSULAR PARK. EPHRAIM SIDE.



ENTRANCE TO PENINSULAR PARK. FISH CREEK SIDE.

ber are under way. Some of this work has been done, but more is needed as some parts have grown up to unsightly weeds. These places should be planted with suitable trees that would add much to the scenic beauty of the Park. Ninety-five thousand trees have been planted on the Park during the past two years, and it is safe to say that four-fifths are alive and thriving. As to the cutting of mature timber, about twenty thousand log feet were taken last winter, consisting of basswood, oak, maple, with a small amount of pine and hemlock. This was sawed into lumber which has been piled and is drying, so that it will be in excellent shape for dressing the coming winter.

Some objections was raised by people living near the park to the cutting of timber, it being claimed that it was not the intention that any tree should be cut from the park lands. The Commission, however, believes that when the lumber needed for park improvements can be cut in the park without impairing its forest growth, or its beauty, it is wise to make use of it. An additional twenty-thousand feet will be cut this year.

Other improvements made in the last two years consist in the painting of all buildings used for the housing of tools, also the outbuildings and house used by the park superintendent. Several wells were drilled. Holland Orchard was pruned. Signs were also posted directing visitors to places of interest about the park. Stairways at Eagle Terrace and a number of benches and tables were constructed to add to the convenience of visitors.

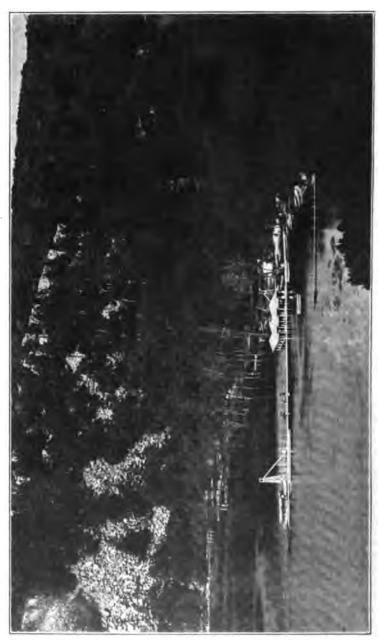
A telephone system covers the park for fire protection purposes. Two high towers have also been erected and during times of drought a constant watch is thus maintained. In addition to these there is maintained a tank wagon and a truck load of cans which are always filled with water and on hand in case of fire. Also in the early spring all fields that are not seeded with pine are burned to rid them of the dry grass.

With all of this work for fire prevention, fires sometimes occur. During the last two years there were several that came so near getting beyond control, that apparently the only condition which saved the park was a change in the direction of the wind. With the shifting of the wind a furrow plowed, was all that was necessary to control the fire.

At the extreme headland of Eagle Point stands Eagle Tower. This tower was built four years ago and the top story of it rises high above the towering trees. From the top one secures an excellent panoramic view of the park. While many do not climb the winding stairs of this tower, more than one thousand during the month of August had registered their names and places of residence.

Another point of interest is along Eagle Driveway, which is so wide that it furnishes parking facilities for automobiles. At one time last summer there were five thousand cars parked along this driveway.

It will be as pleasing to the people of the state generally as it is to the Commission to learn that the popularity of this great playground is increasing. Thousands of visitors are each year making use of it.



DEVIL'S LAKE PARK.

Devil's Lake Park continues to be a favorite resort and playground for the people of the state as well as a point of interest to students of geology. Beside the hundreds of people who have summer homes along the shore or on the surrounding bluffs thousands of people coming by automobile or train visit it each year. This park is one of the small parks owned by the state, containing about 1,040 acres, but it possesses features of interest distinctly its own.

The lake which is one and one-fourth miles long by about one-half mile in width has neither surface inlet or outlet. Notwithstanding this, and the fact that its drainage basin is very limited the lake experiences the same variations in levels that other lakes with inlets and large drainage areas. Thus during the summer of 1916 and 1917 the water was from eighteen to thirty inches above its normal level. The surface of Devil's Lake lies about 600 feet below the East bluff which is 1,400 feet above sea level, so that Devil's Lake which is apparently much higher is really considerably lower than Lake Monona.

Devil's Lake is described geologically as "enclosed on the east, west, and south shores by rugged bluffs of Baraboo quartzite. The north and south-east ends are filled with glacial drift and this glacial drift has formed the lake basin by damming up both ends of the earlier gorge. The bluffs are without glacial drift and the limit of the driftless area is sharply defined." President Van Hise of the University of Wisconsin, a distinguished geologist said of the Devil's Lake region "I know of no other region of the state which illustrates so many principles of the science of geology". It is because of this that geology classes from various state Universities visit Devil's Lake Park each year.

The Commission is making needed improvements in the park to increase the attractiveness as a playground. The improvement of roads leading into and through the park, the enlargement of bathing facilities, the opening of new portions for tenters, the repair of the hotel buildings and cottages, all tend to make the park a most attractive spot for family or tourist picnics, as well as for those who come to study the geology of the place or enjoy its striking beauties. Like the region of the Dells of the Wisconsin river a few miles away the native flora of Devil's Lake Park is well worth careful study. Pains are being taken to preserve the flora as well for its beauty as for its interest to scientists.

It is proposed to erect as soon as practicable an artistic stone bridge over the creek to the north end and also on the Messenger shore; and a concrete walk from the pier to the pavilion at the North end.



LOOKOUT POINT, NELSON DEWEY PARK.

NELSON-DEWEY PARK.

To the late State Senator Robert Glenn more than to any other man is due the fact that the state now owns as part of its park system the beautiful Nelson-Dewey Park. This park is located in Grant county and comprises the angle formed by the confluence of the Wisconsin and Mississippi rivers near where the former joins the latter. It takes in the bluffs along both rivers. Nelson-Dewey park contains 1,651 acres and the most of it lies about 1,180 feet above sea level. The military road terminates on the highest point of the park, about 500 feet above the Mississippi river. From the bluffs a panorama is unfolded to the eye that gives this park the distinction of offering the finest views of any one of the state system.

A rare group of Indian mounds decorate the crest of Sentinel Ridge, overlooking the "father of waters". This group extends along the edge for half a mile and consists of 14 conical, 18 linear and one effigy mound. It has been marked by the Wisconsin Archeological Society. The location of these mounds at a point commanding a beautiful view of a winding river, wooded slope and cultivated plain, bear witness to the sense of beauty possessed by the far away builders of them. Wherever these prehistoric mounds are found in Wisconsin one is sure of a fine landscape view. This park has the further distinction of being the site of the first fur trading post established on the upper Mississippi.

It was from Point Lookout that Father Marquette and Joliet after their long river voyage from Green Bay, up the Fox and down the Wisconsin caught their first view of the lordly Mississippi. The construction of three miles of good roads make accessible Point Lookout and Sentinel Ridge. The road winds about several of the large Indian mounds giving a fine view of these, and reaches the point on the C. B. & Q. railroad where a station for the accommodation of visitors is to be built at an early date.

Other points of interest in the park are Glenn Grotto, Winnashisk, Linden Valley, Roll Away, Black Hawk Monument, Eagle Eye, Signal Hill and Sunshine Hill. Glenn Grotto is a picturesque sand stone cave, down the sides of which the water tumbles in numerous cascades. The wooded portion of the park which comprises nearly two thirds of the park area contains white, red and black oak, basswood, sugar maple, aspen, white birch, ash, slippery elm, black walnut, butternut, silver maple and white elm.

It is the intention of the Commission to extend the road system of the park to Walnut Eddy on the Wisconsin River a distance of one and a quarter miles; and also to lay out a number of trails for pedestrians.



INTERSTATE PARK.

It was wise foresight which prompted some public-spirited citizens twenty-five years ago to suggest the preservation of the beauties of the Dells of the St. Croix by joint action on the part of two states. The St. Croix river forms for part of its length the boundary line between Minnesota and Wisconsin. To have undertaken to preserve for a public park only one side of the river, while the opposite shore was neglected, would have made an incomplete and far from attractive park. It took patient, persistent work on the part of the promoters of the project to secure the cooperation of the legislature but it was finally accomplished.

The park contains 730 acres of which 580 acres are owned by the state of Wisconsin and 150 acres by the state of Minnesota. It is proposed now by the Conservation Commission to locate an additional trout-hatchery on the Wisconsin side of the park, if the Legislature will grant the needed authority.

The Dailes of the St. Criox are the chief features of the park. The river flows through a narraw gorge in the Keweenawan trap rock, which at one point rises to a height of more than 200 feet. There are several picturesque rock formations, the most interesting of which are the "The Old Man of the Dalles" a remarkable profile stone face on the Wisconsin shore and the "Devil's Chair" a column of rock on the Minnesota side. A series of potholes, varying in diameter from one to six feet, and in depth from one to eighty feet, are found on the banks, chiefly on the west side of the river. These potholes, now to be seen high above the river were worked into solid rock by the grinding action of the spherical boulders, many of which still remain in them.

The general improvement work on the park has been under the supervision of a park superintendent. Much of the wooded area has been cleared of underbrush, trails and bridges have been repaired, and the dead and down trees have been cut, from which over 43,000 feet of lumber was sawed. A portion of the lumber has been used in building a tool house near the ball ground which will also afford a dressing room for the players.

The baseball ground has been developed on the upper end of the park, midway between the towns of St. Croix Falls and Taylor's Falls, the towns subscribing \$423.00 and \$119.00 respectively for the work. The time of the superintendent in supervising the work was donated by the state together with other expenses, amounting to \$147.00.

BRULE PARK.

Since the earliest settlement of Northern Wisconsin along the south of Lake Superior the Brule River in Douglas county has been a favorite resort of trout fishermen. It is counted the best trout stream in the state, though some planted streams in other portions of the state bid fair to rival it. Along this stream the state has reserved the tract for a state park. Up to this time there have been no important improvements made in the park except to plant coniferous trees on the cut-over portions. The Conservation Commission has set out in all 72,000 coniferous trees in Brule Park. Some roads have been built, but for the most part the natural wildness of the place, or at least the conditions created by the lumberman remains. At one point along Brule river lots have been set aside on which to build cottages for resorters. The park is within easy walking distance from stations on the Northern Pacific Railroad and the Duluth South Shore and Atlantic Railroad.

Up to this time Brule Park has been sought chiefly by fishermen but its natural beauties including its clear waters and its balsam fragrance will one day make it a popular recreation ground.

CUSHING PARK.

The smallest of the parks of the state system is Cushing Park, in Waukesha county which contains less than ten acres. To the Waukesha County Historical Society is due the credit of creating this park, which in 1915 was turned over to the state to be under the control of this Commission. The park comprises the old Cushing Homestead located a half mile west of Delafield in Waukesha county, and the preservation of the place commemorates the three Cushings, all of whom distinguished themselves by their bravery in the Civil War, William B. Cushing, practically single handed, sank the ironclad ram Albemarle, whch has been pronounced by Col. Roosevelt as one of the most daring deeds on the pages of naval history. Alonzo H. fell at the crest of the battle of Gettysburg, after being shot four times. He did much to turn Pickett's charge and win the day. Howard B., the third brother, was in command of a troop fighting the Apaches in the Southwest, and lost his life in a hand to hand conflict with the Indians. No other Wisconsin family perhaps produced such a trio of brave fighters.

Cushing Park is cared for by the man in charge of the state hatchery at Delafield. Through the generosity of Delafield and Waukesha people a fine road has been built in the park leading past the graceful monument erected in memory of the Cushings. The Commission is beautifying the park by tasteful planting of trees and shrubs, and contemplate further improvements to enhance the beauty of the place.



DEVIL'S LAKE AFFORDS SPLENDID BOATING AND BATHING.

FORESTRY DIVISION

Nurseries

Two forest nurseries are maintained, one at Big Trout Lake, Vilas county, and the other at Tomahawk Lake, Oneida county. The nursery at Big Trout Lake contains approximately eight acres and at Tomahawk Lake, three acres.

The products of the nurseries are used, to restock lands that have been burned over several times, where the seeds have been destroyed and there is no possible chance that they would be reforested of their own accord. Stock is also planted on park lands. Trees are furnished private landowners at cost for reforestation and last year we distributed, without cost, more than 15,000 trees to be planted on school grounds.

The Conservation Commission will be prepared to furnish trees to private landowners for windbreak or woodlot planting, or for the reclaiming of idle waste land within the state. At present, approximately a million and a quarter young trees are growing in the state forest nurseries, of which one million will be available during the coming spring. This stock is all very thrifty and free from pests or diseases. It will make ideal stock for the planting of windbreaks, the improvement of worn-out woodlots, or for the reforestation of estates, waste or idle, cut-over lands. Trees of the following specie will be available:

Species	Age	Price per thousand
White pine seedlings	3 years	\$3.00
White pine seedlings	4 years	4.00
White pine seedlings	6 years	5.00
White pine transplants	5 years	6.00
White pine transplants	7 years	7.00
Norway pine seedlings	3 years	3.00
Norway pine seedlings	4 years	4.00
Norway pine transplants	5 years	7.00
Scotch pine seedlings	2 years	3.00
Scotch pine seedlings	4 years	4.00
Scotch pine transplants	5 years	5.00
Mugho pine seedlings	3 years	3.00
Norway spruce seedlings	3 years	3.00
Norway spruce transplants	5 years	6.00
Douglas fir seedlings	5 years	5.00
Douglas fir transplants	5 years	6.00
Sitka spruce seedlings	6 years	5.00
Red oak seedling	2 years	6.00

During the time that the products of the state nursery have been available to the public there has been an increasing demand for trees. The following table shows the number of trees shipped to private individuals for a period of five years, and below is a table giving details of shipments for past two years:

1914	 20,200
1915	 77,400
1916	 110,200
1917	 272,900
1918	 229,041

Last spring we endeavored to stimulate an interest in the planting of trees on school grounds. A circular was prepared and sent to each county superintendent, high school, and graded school principal along with planting instructions. We shall continue the plan for the coming spring as outlined.

TREES FOR PLANTING ON SCHOOL GROUNDS.

The State Conservation Commission is desirous of having school children of every school in the State plant some small trees on the school grounds. To this end the Commission is willing to donate a limited number, not over 500 trees, to each school if the scholars will plant them and pay the express or parcel post charges. These charges vary from twenty-five cents to rarely as much as a dollar, depending on the distance from the nursery which is located at Trout Lake, Vilas county.

Several species are available,—white pine, Red or Norway pine, Scotch pine, Norway spruce, Colorado blue spruce, Douglas fir, and Arbor vitae or White Cedar. These trees range in size from three inches to one and one-half feet tall. If larger than this they become too difficult to handle in planting.

With each order of trees the nurserymen will send a sheet of "planting instruction" which tells how to take care of the trees when first received and how to plant them. It accents strongly the importance of keeping the roots moist constantly, for a few minutes drying will kill the trees.

As to the time of planting, although Arbor Day has been proposed, it often happens that the trees would have to be kept "heeled in" too long, or they may not have been received on that day, so it would be better to plant them the first favorable day after they have been received. Sunny, windy weather is to be avoided; cool damp days are the best.

After the trees have been planted they need comparatively little care. It is advisable to keep the soil loosened around the tree for about a foot and free from sod.

We begin to realize now, as perhaps we never did before, how great a place wood has in the industries and life of the nation. The coal situation can be relieved only by using more wood, wood that we had

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PORTION OF NURSERY, TROUT LAKE

(Not2: Original pine forest in middle and left backgrounds; new plantation in right background.)



PORTION OF STATE FOREST NURSERY, TROUT LAKE.

not anticipated using for some years. The thousands of wooden ships being built draw on our forests to an extent of which we had not dreamed. Our supply of timber was none too large before the war started, and now with these great quantities of wood,—the railroads; for cars, ties, and telegraph poles. The building of cantonments, and even aeroplanes, makes large drafts on our forests,—and so on, the list could be prolonged indefinitely.

The Commission makes this offer in order, not only to stimulate interest in tree planting by scholars, but also to bring about a better observance of "Forest" or "Arbor Day".

An application blank is herewith enclosed on which you may indicate the number and kiffds of trees desired. If you have no available ground for planting kindly pass this along to the grade-school teachers in your county.

PLANTING INSTRUCTIONS.

First: Unpack the trees immediately after arrival. If impossible to plant the trees immediately, moisten the roots and heel them in some shady spot. By "heeling in" is meant the process of digging a trench of the desired length and about six inches deep, placing the roots of the trees in it and packing the dirt firmly around the roots, leaving only the tops exposed. In the case of large bundles, the strings holding the bundles should be cut and the trees in the bundles evenly distributed along the trench, otherwise the trees in the center of the bundle will become dry. Great care should be exercised in preventing the roots from drying out from exposure to the sun and wind, or from other causes. Drying out of the roots will invariably kill the trees.

Second: The best time for planting is on a dark cloudy day, or in the morning or evening, for then the roots are much less likely to become dry than at other times.

The trees should be carried, roots downward, in pails containing several inches of water. The men usually work in pairs, one man with the implement for making the hole and the other with the pail containing the trees. The first man removes the litter and sod, and digs a hole large enough to receive the roots of the tree without crowding it. The second takes a tree from the pail, places it in the hole in an upright position and slightly deeper than it was in the nursery, and places the soil firmly around it. To secure the best results, care should be taken to place the roots in their natural position, with the larger roots downward and the smaller roots evenly distributed around the larger ones. The spacing is usually six feet apart each way, but may vary with different conditions.

The planting tools are spades or grub hoes. If roots and rocks are encountered, grub hoes are the best. For the better types of soil, spades are often better than hoes. This must be determined by those in charge of the planting. Always bear in mind the fact that exposure



of the roots to the drying action of the sun or wind will kill the plants. Always keep the roots moist.

Third: The plantation should be protected from fire and grazing. A fire line around the plantation will be a great help if cleared annually. Domestic animals not only tramp on and injure the young trees, but eat them off, producing stunted and deformed trees.

Do not allow trees to dry out in the heel. If trees are starting to grow in the heel a little hay thrown over them will make a shade and will retard growth. This may be done immediately upon heeling.

IMPROVEMENT OF FARM WOODLOTS AND TIMBERLANDS.

The woodlots on the farms of the State, in a great majority of instances, can be vastly improved by the application of the principles of correct forestry practice.

In an effort to improve the farm woodlot, to utilize the waste lands on the farms in the State, and to stimulate an interest in the planting of forest trees, the Forestry division of the Conservation Commission desires to cooperate with owners of woodlots, timberlands and waste lands. It is now prepared to give special attention to the different phases of forestry that are of interest to those who desire to improve their woodld or bare areas by planting trees or by introducing practical forestry methods. Thousands of acres of waste land, both on improved farms and on wild lands, which today bear little or no valuable growth, can be put to a practical use and made to bear a valuable crop, by planting desirable forest trees.

It has been estimated that the Wisconsin farm woodlots in 1917 were worth over six million dollars and with the growing need of wood for fuel because of the shortage of coal, the importance and value of the woodlot as a great asset will become more and more evident.

In order that these woodlots may be properly managed an effort should be made to not only follow some simple plan of cutting but also certain areas should be replanted to rapid growing trees in order to provide for a future supply. The following suggestions may be of some assistance in working out a cutting and planting plan.

All down timber or the remains from logging operations, which include tree tops and slab piles, are usually suitable for no other purpose than fuel. The latter can be converted economically because cutting in the woods and skidding costs are eliminated.

All dead or dying and unsound trees and those which are distorted or have wide spreading crowns and short trunks should be removed.

In stands where the trees are too close together for good development, a thinning can be made and worked into fuel wood. This is especially true in pole wood stands. In such thinning the crooked, unsound trees should be removed first and then those of lower lumber value. Thinnings should be very carefully made. Heavy cuttings may cause severe injury to the permanent stand.

In selecting species for fuel wood, it is of course best to take those of lesser value for the different lumber products. The form and soundness of a tree will determine its fitness for lumber uses. Some species, however, are of more value than others for this purpose and should not be used for fuel.

Trunks which produce good sound saw logs should not be made into fuel wood. The standard of quality of logs which may be rated as salable is constantly decreasing. On the other hand, it will pay better to convert logs of certain species into fuel than to dispose of them as lumber. A small white ash or black walnut log even if a little crooked or "cat faced" may have a value for lumber whereas the same quantity of birch, scarlet oak or red maple would not pay for its delivery as lumber. Market conditions must determine largely what product pays best.

The policy of the Commission to cooperate with farms or other small timber holders in the matter of the improvement of their holdings or in the marketing of their mature timber will also be continued during the future. On request to the commission an expert forester will make a personal examination of the land in company with the owner, tenant or farm superintendent. During these examinations, advice as to the best methods of improving the woodland will be discussed, and later a practical working plan report, with recommendations, will be prepared for the owner. This report will not only include the most practical methods of the disposal of the mature part of the woodland, but will consider the planting of new trees, and the general improvement of the land.

The Commission is also willing to furnish a speaker for any organization or public institution wishing to arrange a lecture on forestry. These lectures will be illustrated wherever the opportunity permits. The only expense connected with land examinations and lecture work will be the traveling expenses and maintenance of the speaker or examiner. Application for planting stock, advice or cooperation should be addressed to the Conservation Commission, Madison, Wisconsin.

COST OF PLANTING FOR THE STATE

Spring, 1918.

Oxley Ranger Statten. Trees Planted Total cost of planting . Cost per acre No. acres planted	216,100 \$724.95 \$3.35 225	Total cost of planting .	43,650 \$260.80 \$6.65 43
Sarner Ranger Station. Trees planted	251,900 \$1,379.20 \$15.18 252	Rest Lake Ranger Station. Trees planted Total cost of planting . Cost per acre No. acres planted	7,300 \$31.50 \$4.50



EAGLE TERRACE.



A RESTFUL SPOT.

STATE NURSERY INVENTORY July 1, 1918

Trout Lake Nursery

Specie	Number	Years in seed bed	Years in Seed bed Trsp. bed	Source of Seed	Helcht	Condition	1919 Price per M.	Value
White Pine Norway Pine Mugho Pine Moryay Spince Douglas Fir Sitka Spruce	900.000 1000.0000 1000.000 1000.000 1000.000 1000.000 1000.000 1000.000 1000.0000 1000.000 1000.000 1000.000 1000.000 1000.000 1000.000 1000.0000 1000.000 1000.000 1000.000 1000.000 1000.000 1000.000 1000.0000 1000.000 1000.000 1000.000 1000.000 1000.0000 10000.0000 1000.0000 1000.0000 1000.0000 1000.0000 1000.0000 1000.0000 1000.0000 1	ちゅめいちゅうゅうおおうじらめる	0000000000000000	D. Hill Co. D. Hill Co. D. Hill Co. U. S. F. C. D. Hill Co.	######################################	A V V V V V V V V V V V V V V V V V V V	\$\$400004F.400000000000000000000000000000	8300.00 718.00 555.00 558.00 830.00 830.00 755.00 755.00 875.00 8

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Grand total		řő.	Total	\$1,100.00 \$4,969.00

SHIPMENTS OF PLANTING STOCK FROM

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Name and Address of Consignee		White	e Pine			Red Pin	
	2-1	2-2	8-0	4-0	2-1	2-2	3-4
Peninsula Park, Fish Creek, Wis		20,000				20.000	
Devils Lake Park, Devils Lake, Wis.		8.000				1,000	
Marquette Park, Wyalusing, Wis Interstate Park, St. Croix Falls, Wis	-	4,000				500	
Brule River Lands, Brule, Wis		8,000 8,000				4.000 19.000	
Headquarters Pltg., Trout Lake, Wis		9,250		8.000		50.750	
Headquarters Pitg., Trout Lake, Wis. Star Lake Ranger St., Star Lake, Wis				8,000		8,000	
Plum Lake Ranger St., Plum Lake, Wis. Oxley Ranger Sta., Boulder Jct., Wis. Rest Lake Ranger Sta., Rest Lake, Wis.		1,750		3,000	1	120,575	
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Dr. F. C. Wood, Coloma, Wis.	1,000						
Rhinelander Nur, Co., Rhinelander, Wis				· · · · <u></u> ·		5,000	نند:
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Mr. Harris, Waukesha, Wis							
M. C. Rotier, Milwaukee, Wis	l						
M. C. Rotter, Milwaukee, Wis. W. M. Person, Osseo, Wis. C. F. W. Seiler, Osseo, Wis. Ed Kremer, Madison, Wis. J. H. Fiebing, Elkhart Lake, Wis. W. J. Steinloff, Platteville, Wis. J. H. Accole, Prairie du Sac, Wis. J. J. Angel, Jefferson, Wis. James Wallace, Amery, Wis. David Dohmeyer, Thiensville, Wis. W. H. Lighty, Madison, Wis. W. H. Lighty, Madison, Wis. O. K. Olson, Augusta, Wis. Felix Kaznerchak, Kewaunee, Wis. Cloquet Exp, Sta., Cloquet, Minn.							•••••
C. F. W. Seller, Osseo. Wis.		400		• • • • • • • •	• • • • • • •	' • • • • • • • • • • • • • • • • • • •	•••••
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W. J. Steinloff, Platteville, Wis.		100					
J. H. Accole, Prairie du Sac, Wis.,							•••••
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David Dohmanar Thlengettle Wis			·····	••••••		300	• • • • • • • •
W. H. Lighty, Madison Wis		900		500	• • • • • • • •	230	500
Y. M. C. A., Mukwonago, Wis		250				250	
O. K. Olson, Augusta, Wis		50				50	
Felix Kaznerchak, Kewaunee, Wis		800					••••
University Mich Ann Anhan Mich		1) 1		t .	••••••	10 60
University Mich., Ann Arbor, Mich.,. E. B. Ingram, Eau Claire, Wis		5.000		• • • • • • • •		• • • • • • •	10,000
Rev. E. Perry, Harshaw, Wis. Rev. E. Perry, Harshaw, Wis. Milwaukee Co. Park Com., Milwaukee, Wis. R. N. Belland, Walworth, Wis. H. J. Luehring, Milwaukee, Wis. Ben Meler, Coon Valley, Wis. 1. S. Donald, Maynt Horsh, Wis.		100					- 1 - 1 - 1
Milwaukee Co. Park Com., Milwaukee, Wis.			1	1,000		2,000	
R. N. Belland, Walworth, Wis							• • • • • • •
Bon Moler, Coon Valley, Wis	· · · · · · · · · · · · · · · · · · ·		j	•••••			20
J. S. Donald, Mount Horeb, Wis.		100			•••••	50	
R. S. Schelbel, Madison, Wis.							
F. B Metcalf, Milwaukee, Wis N. Paulson, Iola, Wis	10	10		10	10	10	10
N. Paulson Iola, Wis	I	1,000					
J. H. Dennison, Arena. Wis F. R. Cordes, Okauchee, Wis	• • • • • • • • • • • • • • • • • • • •			200			500
J. Norseman, Middleton, Wis.	50	100			100	50	
J. Norseman, Middleton, Wis			50,900				25,00
E. C. Voelzke, Manitowish, Wis.		 . !				100	Z
U. E. Toepfer, Madison, Wis.		500 500	۱۰۰۰۰۰۱	• • • • • • •		500	• • • • • • • • • • • • • • • • • • • •
H. J. Grell, Johnson Creek, Wis Mr. Nelson, Minocqua, Wis						500	• • • • • • •
Mr. Ed. Johnson, Winneconne, Wis		l		• • • • • • • •		100	
Frank Miller, Minocona, Wis						50	
J. B. Tussell, Appleton, Wis E. Wilson, Gordon, Wis		20	25			25	Z
E. Wilson, Gordon, Wis.			•••••	• • • • • • •		30,000	• • • • • • •
O. C. Doering, Fifield, Wis	• • • • • • • • • • • • • • • • • • • •	24.000		••••••	• • • • • • • • • • • • • • • • • • • •	24,000	••••••
Total shipments, spring of 1917	1,060	85,980	50,150	82,510	110	397,260	36, 861
	-,	00,000	53,338	•			

Private shipments (1914). Private shipments (1915). Private shipments (1916). Private shipments (1917).		77,400 110,200
Motol for A manua	•	400 000

MVISION

FATE FOREST NURSERIES (Spring of 1917)

18'E	ENUI	K LAK	HAW	TOMA							BRY	URS
Tot	W. Sp.	Red Pine	Pine	w . 1	8k. 8p.	W. Cedar	D. Fir	C. B. S.	Spruce	Norway	Pine	8cotcl
		2-1	2-8	2-1	4-0	4-0	8-0		2-2	2–1	3 –0	2-1
40.												
4, 5, 16, 29, 71,											•••••	500 .000 .800
16.					500	500	500	750				. 300
29,			7,000									700
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125, 105, 19,												
105,										• • • • • • • • •	•••••	150
1 1.	200	• • • • • • • • • • • • • • • • • • • •	·····	••••	• • • • • • • •	•••••	• • • • • • • • • • • • • • • • • • • •	100	200	• • • • • • • • • • • • • • • • • • • •	200	••••
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705,	4,650	10,000	7,000	10,000	500	6,420	7,785	11,885	1,775	3,000	10,600	07¢
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C. B. S.—Colorado Blue Spruce D. Fir—Douglas Fir W. Cedar—White Cedar Sk. Sp.—Sitka Spruce

Planted by State 1617, 432,625

1918. REPORT OF SHIPMENT

Name and Address		W	hite Pi	10		[Norw
Name and Address	2-0	3-0	2-1	2_2	2-3	3_0	2_1
			ļ.———			<u> </u>	-
Henri Pasteau, Webster Grove, Mo.							
Daniel Shilts, Stanley, Wis	• • • • • • •	• • • • • • •	•••••	100			· •• ··
Paul B. Bjerkeng, Beldenville, Wis.				100			
Otta Baeseman, Edgar, Wis				· 100			
Tom Blager, Alma, Wis			· · · · · · · ·				
James King Nursery Flinburgt III	• • • • • • •		••••••	• • • • • • •			. 500
B. S. Isaacson, Nye, Wis.							
A. C. Graf, St. Croix Falls, Wis							
A. Escheweler North Lake Wi	• • • • • • • •			100			
F. A. Aust. Madison Wis	• • • • • •	• • • • • • • •		1 000		• • • • • • •	
W. D. Lawrence, Mondovi, Wis				1,00C 200			
V. B. Negard, Northfield, Wis,				75 100			
Ben Meley Coop Veller Wis				100			1
E. J. Schroeder, Wanbeno, Wis	· • • • • • •			500		·····	5 0 0
W. H. Dahms, Bonduel, Wis				000			
Daniel Phitis, Stanley, Wis. Peter Lee, Deerfield, Wis. Peter Lee, Deerfield, Wis. Paul B. Bjerkeng, Beldenville, Wis. Otta Baeseman, Edgar, Wis. Tom Blager, Alma, Wis. John Etzel, Hartford, Wis. James King Nursery, Elmhurst, Ill. B. S. Isaacson, Nye, Wis. A. C. Graf, St. Croix Falls, Wis. E. Ballinger, Lake Forest, Ill. A. Eschewrier, North Lake, Wis. F. A. Aust, Madison, Wis. W. D. Lawrence, Mondovi, Wis. V. B. Negard, Northfield, Wis. Art Markley, Kennan, Wis. Ben Meier, Coon Valley, Wis. E. J. Schroeder, Waubeno, Wis. W. H. Dahms, Bonduel, Wis. Jos, Donges, Mequon, Wis. Frank C. Klode, care Fisher Furniture Co. Milwaukee, Wis. Ben Durkee, Wild Rose, Wis.* Ben Durkee, Wild Rose, Wis.*						 .	
Frank C. Miode, care Fisher Furniture Co					ļ		
Ben Durkee, Wild Rose, Wis *	• • • • • • • •		• • • • • •	• • • • • • •		•••••	
J. H. Fieburg, Plymouth, Wis	• • • • • • • •			100			
Wis, Conserv, Comm., Spooner, Wis.				250			
Milwaukee, Wis. Ben Durkee, Wild Rose, Wis.* J. H. Fleburg, Plymouth, Wis. Wis. Conserv, Comm., Spooner, Wis.* Henri Pasteau, Webster Groves, Mo. A. E. Doolittle, Sturgeon Bay, Wis.* H. J. Svensen, Amery, Wis. Avid Leaf, St. Croix Falls, Wis. Mil. Co. Park Comm., So. Milwaukee, Wis. S. S. Robinson, St. Croix Falls, Wis. J. J. Johnson, Coon Valley, Wis. B. S. Isaacson, Nye, Wis.							
H. J. Svensen, Amery Wis	••••••					•••••	
Avid Leaf, St. Croix Falls, Wis	• • • • • • • •	· · · · · · · ·	••••••	• • • • • • •			
Mil. Co. Park Comm., So. Milwaukee, Wis.,				2,000			l
S. S. Robinson, St. Croix Falls, Wis					,		
B. S. Isaacson, Nyo Wis	· · · · · · · ·			200	¦		
S. S. Robinson, St. Croix Falls, Wis. J. J. Johnson, Coon Valley, Wis. B. S. Isaacson, Nye, Wis. Wis. Conserv, Comm., Wyalusing, Wis. L. M. Chatfield, Osceola, Wis. John M. Briscoe, Orono, Me. James Wallace, Amery, Wis. James Wallace, Amery, Wis. Mrs. E. B. Ingram, Eau Claire, Wis. E. A. Forbes, Bhinelander, Wis. L. A. Olmsted, Minocqua, Wis. L. A. Olmsted, Minocqua, Wis. Wis. Colonization Co., Radisson, Wis. Mis. Colonization Co., Radisson, Wis. Mis. Colonization Co., Waterloo, Wis. E. Hawse, Woodruff, Wis. Tom Mathews, Minocqua, Wis. Frank Miller, Minocqua, Wis. Frank Miller, Minocqua, Wis. Frank Miller, Minocqua, Wis. Fred Wolff, Trout Lake, Wis. Fred Wolff, Trout Lake, Wis. Otto F. Toepfer, Madison, Wis.	· • • • • • • •	•••••		3.000			
L. M. Chatfield, Osceola, Wis						l	1
Wis, Colonization Co., Radisson, Wis				1,000			
James Wallace Amery Wis				· • • • • • • •			
Mrs. E. B Ingram, Eau Claire, Wis	• • • • • • • •	• • • • • • • • • • • • • • • • • • • •		1.000			• • • • • • •
E. A. Forbes, Rhinelander, Wis.,,		•••••		1,000	5		
L. A. Olmsted, Minocqua, Wis					5 5 25		
Wis Colonization Co. Padisson W.					25		· · • • • •
McKay Nursery Co., Waterloo Wi	• • • • • • •		• • • • • • • • • • • • • • • • • • • •	2,000 1,000		• • • • • • • •	• • • • • •
E. Hawse, Woodruff, Wis		1,000		1.00			
Tom Mathews, Minocqua, Wis							
Cleve Cliff Iron Co. Sand L.							• • • • • •
ising, Mich.		40 000	1				
Fred Wolff, Trout Lake, Wis		40.000					
Otto F. Toepfer, Madison, Wis							
Ising, Mich. Fred Wolff, Trout Lake, Wis Fred Wolff, Trout Lake, Wis Otto F. Toepfer, Madison, Wis. J. B. Walvoord, Cedar Grove, Wis. Mil. Co. Park Comm. So. Milwaukee, Wis. R. J. Nye, Superjor, Wis.		400	, 			200	• • • • • •
R. J. Nye. Superior. Wis.	• • • • • • •	• • • • • • • •		• • • • • • •			• • • • • •
C. C. Yawkey, Hazelhurst, Wis		•••••					
Mil. Co. Park Comm., Whitefish Bay Sta-							
Ion Hes Manitomich Wis							• • • • • •
Wm. Hartwig Emerald Wis	• • • • •	· · · · · · · ·		· · · · · · · · ·	200		• • • • • • •
William Hirth, Columbia, Mo		• • • • • • •					
E. A. Thieman, Florence, Wis		2,500				2.500	
E. Perkins, Woodroff Wis							
Robert Burnes, Woodruff, Wis		• • • • • • •		• • • • • • • •			• • • • • • •
C. J. Coon, Trout Lake, Wis.				• • • • • • • •	1.500		
State Island, Saynor, Wis*					20		
E. Ballinger, Lake Francisch, Wis.				900			•••••
Beaudry's Nursery Co. Chicago, I.	· · · · · · ;			• • • • • • •			
Mil. Co. Park Comm. So. Milwaukee. Wis. R. J. Nye. Superlor. Wis. R. J. Nye. Superlor. Wis. C. C. Yawkey, Hazelhurst. Wis. Mil. Co. Park Comm., Whitefish Bay Station, Wis. Joe Iles, Manitowish, Wis Wm. Hartwig, Emerald, Wis. Wm. Hartwig, Emerald, Wis. Wm. Hartwig, Emerald, Wis. McKay Nursery Co., Waterloo, Wis. E. A. Thieman, Florence, Wis. McKay Nursery Co., Waterloo, Wis. E. Perkins, Woodruff, Wis. C. J. Coon, Trout Lake, Wis. State Island, Saynor, Wis* Crystal Brook Club. Spooner, Wis. E. Ballinger, Lake Forest, Ill. Beaudry's Nursery Co., Chicago, Ill. E. O. Brown, Rhinelander, Wis.	• • • • • • • • • • • • • • • • • • • •	•••••	500	• • • • • • •			:00
E. O. Brown, Rhinelander, Wis University of Michigan, Ann Arbor, Mich	• • • • • • • • • • • • • • • • • • •					10.000	
			500	14,785	1,760	12,700	1.500

FROM TROUT LAKE NURSERY. 1918.

De		Scotc	h Pine	N. Spruce	G. B. Spruce	Dougle	s Fir	W. Cedar	Red Oak	P. Mugho	Tota
2-2	2_8	3-0	2_2	2—2	2—2	8-0	2—1	4-0	2_0	4-0	
			800	300		100	 		 		1.0
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7 424	1 18 666	8,1000	30,645	23,006	14,265	9,850	2,156	4,805	Digi 815 d	by G (5(191,

PLANTINGS.

Name and Address		W	hite Pi	ae		,	Norway
Name and Address	2—0	8-0	2_1	2-2	2_3	3_0	2—1
Curtis Planting, Trout Lake, Wis.*					6,825 800 1,500 74,475		
J. B. Cook, Star Lake, Wis.* Henry Freund, Oxley, Wis.* A				500	8,875 27,825 5,000		
Trout Lake Grand Totals		50,800	500	16,825	121,560	12,700	1,500
School orders				 			
Total Tomahawk Lake Total							
1918 Grand total							

1918 SHIPMENTS FROM

State Planting, Tomahawk Lake, Wis.*	 ••••••		10,000	10,000		• • • • • • • • • • • • • • • • • • •
A. E. Doolittle, Sturgeon Bay, Wis.* John M. Briscoe, Orono, Me. Cleve, Cliff Iron Co., Munising, Mich. C. C. Yawkey, Hazelhurst, Wis.	 	1.600			35,000	
Brule Park, Brule, Wis*	 	(6 yr.)				100
Wm. Wilkens, Wausau, Wis	 		300		·	

^{*} State Plantings, 633,020. 1918 Private Shipments, 229,041.

STATE

Pine		Scotc	h Pine	N. Spruce	G. B. Spruce	Dougla	s Fir	W. Cedar	Red Oak	P. Mugho	Total
2—2	2_3	30	2—2	2_2	2—2	80	2_1	4-0	2—0	40	
	5, 000 675 6, 300		4,200 1,000	500	450						16,979 2,479 1,500
136,250 1,500 1x2,750	30,700 37,825 8,225		1,900 900	w.spruce 75 2,800	50	.,					251, 90 43, 65 216, 19 5, 00
338, 350	87, 761	3,100	38,645	25, 866	14,765	9,850	2, 156	4.805			537,60 729,58
	87. 701	3,100	36, 910	w.spruce 75		9,830	2, 190	4,800	515		15.47
											745,06 117,00
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TOMAHAWK NURSERY. 1918.

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1918 REPORT OF SCHOOL ORDERS SHIPPED FROM TROUT LAKE NURSE

Name and Address	County	W. Pine	N. Pine	S. Pine	N. Spruce	C. B. Spruce	Douglas Fir	W. Codar
C. F. Koch, Brillion H. E. Polley, Oshkosh. School Board, New Auburn O. A. Reetz. Edgar J. C. Ferguson, LaFarge L. E. Welland, Westby. F. W. Hein, So. Milwaukee	Calumet Winnebago Chippewa Marathon Vernon Vernon Milwaukee	10 20 15 75	15 5 10 10 15 75	5 20 15 75	15 10 20 20 10 75	15 5 10 25 15 20 75	15 5 20 20 75	5 20 20 75
J. M. Hawmer, Roberts. E. F. Brown, Rib Lake E. A. F. Kuehl, Coleman Williams Bay Consolidated School	St. Croix Taylor Marinette Walworth,.	5 50 10	25 5 5	25 5 5	25 5 50 20	25 5 50 5	5 5	25 5 5
F. J. Mealey, Holsombe	ChippewaGreen Lake Dodge LaCrosse Marquette. Dodge Polk	150 10 15 5 125	40 10 10 10 25	50 5 100	20 15 10 25	50 10 10 5 25 25	10 15 5	10 360 200
Militown J. A. Case, Oshkosh, (898 Main St.) Colfax High School, Colfax W. W. Morris, Kohler H. G. Lapman, Pepin E. J. Hughes, Randolph	Winnebago Dunn Sheboygan, Pepin Dodge and Columbia	25 6 50 15	50 6 50 5	25 6 50 5	50 6 50 10 200	10 6 50 10 200	20 6 50 10 100	20 6 53 10
L. G. VanGordon. Baldwin. C. L. Rohlinson, Tripoli J. W. Klingman, Fairchild. R. B. Theil. Plainfield. C. H. Bachhuber, Port Washington. C. I. Coates, Lake Beulah P. M. Brown, Hartland.	0+ O-01-	25 200 10 6	10 10 15 100 10 6	10 10 15 50 20 6	10 10 15 100 10 6	10 10 15 10 6 15	10 10 15 20 6	25 50 6 40
P. M. Brown, Hartland	Columbia LaFayette,	50 150	125 25 250 10	50	10 85 25 25 100 10	25 25 10	25 25 25 25 10	450 125
J. H. McNell, Beloit		100	25 100	200	25 100	25 100		25 199
St. John's Institute, St. Francis Alice A. Quade, Rochester St. Joseph's Orphan Home, Superior. S. B. Tobey, Wausau	I MILLWANKAA	100	50 50	50	50 10 100	50 10 100 25	50 100 25	50 250 100 25
N. G. Lytle, Ogdensburg C. W. Monty, St. Croix Falls John Miller, Jr., St. Nazlanz M. N. Michels, Kenosha John J. Theme, Sheboygan R. J. O'Hanlan, Milwaukee	Waupaca Polk Manitowoc Kenosha Sheboygan.	25 20 100	10 10 25 20 10	25 20	10 25 20	10 25 20 10	25 20	10 25 20
(28th and Clarke St.) Rev. Ph. J. Klein, St. Francis 'Sacred Heart School) Park St. School, Milwaukee (Park and Hanover Sts)	Milwaukee. Milwaukee Milwaukee.		100	100	100	100	100	800 100
(Whitefish Bay) J. A. Gronowski, Gresham Hanover Street School, Milwaukee.	Milwaukee. Shawano Milwaukee.	100 50	3 0	30 50 12	30 50	250 50 12	\$0 50	80 50
(Hapover near Mitchell) Arthur R. Williams, Cambria St. Mary's School, St. Francis	Columbia Milwaukee.	6 10	6 10	6 5	6 25	6 50	6 50	50 \$50

REPORT OF SCHOOL ORDERS SHIPPED FROM TROUT LAKE NURSERY-Continued

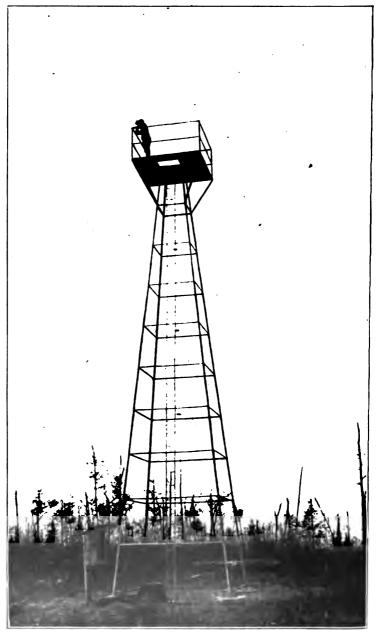
Name and Address	County	W. Pine	N. Pine	S. Pine	N. Spruce.	C.B. Spruce	Douglas Fir	W. Cedar	Total
s. A. Cherney, Luxembourg a M. Weltzien, Milwaukee 5th Ave. School)	Kewaunee., Milwaukee,	5 25	5 25					15	25 50
evers, N. Milwaukee . Klug, Cedar Greve Klug, Cedar Greve Klug, Cedar Greve Klug, Cedar Greve Kopen Bornary, St. Francis . Richard, Milwaukee, 103 30th St. lie F. Boersier, Curtis . Koeppel, Milwaukee . (21st St. School)	Milwaukee. Sheboygan. Polk Milwaukee. Milwaukee. Clark Milwaukee.	100 100 20 80	2 6 15 80 10 20 80	8 5 80 10 20 50	80 10 20 30	50 10 20 30	50 10 20 30		13 80 20 440 60 180 200
riss st. school) rry Greibe, Plymouth. st Grimm. Cassville. st. Grimm. Cassville. J. F. Barblen, St. Francis. d. Engelking. Sheboygan, R. R. 1 C. Brockens, Bagley Francis Assisi School, St. Francis and of Education, Park Falls. b Ave. School. Milwapkee.	Sheboygan. Grant	6 50 50	50	50 10 50	50 50 50	50 25 75 50	175 175 175 50 10		18 175 175 300 95 100 150
7th Ave & Mitchell St. uryland Ave. School, Milwaukee Cor. Prospect & Maryland Aves.	Milwaukee, Milwaukee,		10	50 25	50 200	10	200 20		300 275
auk E. Moore. Belmont. me Bonke, Star Lake. P. Colburn. Rhinelander L. Nelson, Manitowoc. (R. 4) S. Luclus, Solon Springs. Selse Creech, St. Croix Falls.	LaFayette. Vilas Oneida Manitowoc. Douglas Polk	50 57 12 125	56 10 225	20 28 10 50	35 10 25	10 138 10 *25	64 10 50	410 80 425	50 40 458 62 250 8
E Pfifenberger, Twin Lakes H. Martin, Juda mma J. Gardner, Milwaukee (Bartlett Ave. School) rab J. Carroll. Milwaukee	Kenosha Green Milwaukee. Milwaukee.	15 10		10 50 50	5 10	15	15 10	60	80 100 70 50
Brown St. School, Cor. 20th St.) Sub totals		2,201	1.745	1,617	2,424	2,148	2,016	8,212	
Grand total		125 	*25 			*25	 	435	15,478

Mugho Pine.

ditka Spruce.

White Spruce.

Hed Oak.



FIRE LOOKOUT STATION. FOREST RESERVE.

FOREST FIRE PREVENTION PLAN

BY

Chief Ranger, E. M. WEAVER.

Under the Weeks Law the National Government cooperating with the state for fire protection on the headwaters of navigable streams, appropriated \$4,500 for the salaries of patrolmen employed during the fire season, April 1, to December 1. These patrolmen with the state rangers and general laborers, constitute the fire fighting force. They are men of experience and knowledge of fire fighting. During the season when there is no danger of fire they are employed in building roads, fire lines, improving and repairing telephone lines.

In the year 1917 we confined our protective work principally to the proposed forest reserve area; Vilas, Oneida, Forest and east part of Iron county. This territory is the headwaters of the Wisconsin and Chippewa rivers and is well covered with timber and a good stand of reproduction. Within this territory we had forty-four fires which burned over an area of 16,252 acres with a damage of \$11,650 to timber and improvements.

In July and August of this year the Government called for volunteer engineers to aid in the prosecution of the war and eight of our men, without urging, immediately answered the call. Their enlistment in the National Army crippled our organization but fortunately weather conditions were such that we suffered little from fires, but our construction work was hampered considerably due to scarcity of help and high wages paid in all fields of labor.

The forest area was divided into 17 patrol districts varying in size from 60,000 to 138,000 acres with a ranger or patrolman in complete charge of each district and held responsible to the head ranger for the efficiency of the fire fighting force under his command. It was the duty of each man in charge of a district to keep posted on general conditions and affairs within his district that had a bearing on the fire situation, take care of the fire fighting apparatus and oversee all important work, such as road building, fire lines and trail construction, telephone lines, maintenance and inspection. He was responsible for all state property and was required to make reports once a week of work done each day and forward to head ranger. After each fire he must make a report of cause of fire, location and area burned over, amount of timber destroyed and all other loss of property; what steps were



FOREST FIRE PREVENTION PLACARDS DISTRIBUTED BY THE CONSERVATION COMMISSION.

taken to extinguish the fire, number of men employed and expenses incurred. These facts are submitted to the head ranger who compiles a yearly report of all fires. Inspection is made each year by the Federal Forest Service to determine how effectively the state is handling the cooperation. Inspectors make a point of not only getting in touch with the Conservation Commission by going through the Week's Law file and making a critical examination of the fire fighting plan, but of meeting personally as many of the rangers and patrolmen as necessary to determine the effectiveness of the protection and efficiency of the personnel. It was on his tour of inspection in October of 1917, he recommended protecting a greater area by giving patrolmen a larger district. In April of 1918, when the fire season began we secured seven federal patrolmen, five of which were located off the proposed forest reserve area and each were given three counties as a district to patrol. The districts were as follows:

- No. 1. Douglas, Bayfield and Burnett counties.
- No. 2. Ashland, Iron and Price counties.
- No. 3. Lincoln, Taylor counties and north half of Marathon.
- No. 4. Forest, Florence and Marinette counties.
- No. 5. Langlade, Shawano and Oconto counties.

The other two patrolmen were located in Vilas and Oneida counties. Most of these men used Ford cars to cover their territory. In addition to their patrol duties they carried on a campaign of education among the town chairmen who are town fire wardens and road superintendents, who are assistant fire wardens. Many of the chairmen and road superintendents did not understand what their duties were relative to forest fire protection, but after receiving instructions from patrolmen, were glad to assist in carrying out the provisions of the law and cooperate in every way. It is the duty of patrolmen to post fire signs in conspicuous places, while patrolling their route. Thousands of these are posted each year and we believe they are doing much good. In a dangerous dry time the town fire warden is required to post special warning notices, forbidding the setting of any fire except for cooking food or warming the person. After these notices are posted no person can do any burning without first securing a permit from the town fire warden. When such permits are requested, the patrolman inspects the area to be burned and if found safe, a written permit is granted, but such permit does not release the person doing the burning from liability for damage to other property caused by his fire. We believe that more good can be accomplished by the methods we have pursued this last season than by the intensive methods used in protecting a smaller area in years past.

REPORT OF TOWERMEN 1918

Number of Fires Reported

April	May	June	July	August	September	October	Total
80	36	44	20	10	5	0	195

Number of Days on Lookout Duty

Aprli	Мау	June	July	August	September	October	Total

The towermen are used on improvement work when not on lookout duty, April, May and June being most dangerous this year on account of but little rain in these months.

FIRE REPORT 1918

Cause

Light- ning	Rail- roads	Lum- bering	Brush burning	Campers	Incendiary	Unknown	Total
0	28	4	8	6	1	20	57

Area Burned Over

		. (Over Ten Acres	,	· ·
Under i acre	ł to 10 acre	Damage under \$100	\$100 to \$1.000	Over \$1,000	Total
39	7	5	4	2	57

Damage

To Timber	Young	To Improve-	Area Bui	Total Acre	
TO TIMOPP	Growth	ments	Forest land	Open land	Total Acte
\$560,00	\$3.870.00	\$3,430.00	4 acres	3,481 t	8.485 [‡] A.

The Railroads are responsible for the most fires causes usually by defective spark arresters and ash pans.

PREVENTION AND FIGHTING OF FIRES.

The campaign of education carried on by the patrolmen and rangers is briefly summarized in the following instructions:

TO TOWN CHAIRMEN AND ROAD SUPERINTENDENTS.

Each town chairman by provision of law is town fire warden, and each road superintendent is assistant town fire warden to the chairman. Under the law you are in duty bound to fight such fires and when you are notified of a fire or receive a call for assistance, YOU MUST ACT IMMEDIATELY, irrespective of what work you may be engaged in when you receive such notice or call for assistance.

You have the power of sheriffs to arrest without warrant for any violation of the fire laws. You have the power to demand the assist-

ance of any able-bodied male citizen to help fight fires.

FARMERS AND SETTLERS must not start fires during dry periods. Before burning your brush talk the matter over with either your town chairman or with a road superintendent; these men under the law are town fire wardens. Always help willingly and promptly when called upon to fight fires. You cannot tell what day you may wish the help of your neighbors to save your own home from fire. Do not start back fires until absolutely necessary.

PAYMENT OF FIRE FIGHTERS.

Town chairmen and road superintendents will be paid such a wage for fire fighting as may be determined upon by the town board. All men called out by the fire wardens shall receive not more than twenty (20c) per hour for the time actually employed, which compensation is also to be paid by the town board.

To Fire Fighters.

If you discover a fire too large to be put out at once, get help immediately. If necessary, notify the nearest fire warden, or patrolman, or if neither is available any sheriff or deputy sheriff of the county who should notify the fire warden.

Organize and select the best man as leader. When a fire-warden is present he should take charge.

Form a plan of action and stick to it. Consider the rights of property owners, but do not let them back fire to protect their own property unless it will be for the general good. Back fires should be authorized only by the man in charge.

If you believe that a fire will take a considerable time to put out, divide your force into crews, one to relieve the other. Keep some one on the job all the time.

The best tools for fighting fire are the shovels, mattock, ax and wet sacks. Rakes, hoes and brush hooks are also useful.

Sand or earth thrown on a fire is as effective as water.

If possible, stop the fire by means of a trail or trench. Where the fire burns slowly in open timber pinch it out by knocking the burning material back into the burned area. Put out logs and stumps by throwing dirt on them. Never leave burning trees or snags near the fire line. Many fires well under control have broken out again when a little additional work would have made them quite safe.

Work at night or early in the morning, instead of by day, when it is possible. At night a six-inch trail will often hold a fire that would leap a quarter of a mile during the heat of the day. At night less time is wasted carrying water to the fire fighters.

Fire occurring in dense brush or thickets may require back firing. Start your back fire far enough in front so that you will have time to complete your work before the main fire reaches you. Start it from a road, trail or stream if possible. If not, cut a trail, scrape it clean, light your fire and guard your trail.

Back fire along the top or bottom of a ridge rather than half-way up the slope.

See to it that the ends of your back fire are safe. Run them together if possible, thus surrounding the main fire, or else run them into portions that have burnt out, or to a stream or road. A back fire is just as dangerous as the original one unless it is perfectly safe throughout the whole length.

Watch the fire line after the fire is under control. Sparks blown from burning snags, chunks thrown from falling trees, and many other things may cross the fire line. Keep some one on guard.

Use your best judgment in fighting fires when you are in charge as local conditions make it impossible to give any ironclad rules to follow. If some one else is in charge obey his instructions.

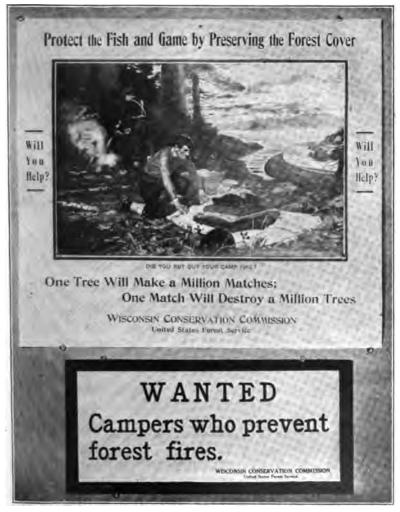
Lumber Companies—All lumber companies operating steam railroads must equip their engines with the best fire fighting paraphernalia possible and the following suggestions are made for this equipment and means of combatting fires:

(1) Proper stacks and screens. (2) Barrels of water along steep grades, at intervals, where there are no streams of water that have a steady flow in dry weather. (3) Equipment for all engines, such as hose and all attachments necessary to handle water quickly and efficiently, to extinguish fires which start along the railroad. (4) Water tank car for emergencies. (5) A patrol should be made after all trains in dry weather. (6) A careful inspection should be made at regular periods of all equipment. (7) Instructions should be issued to all section crews and employees to be on the lookout for fires and just what they should do toward extinguishing same. (8) All inflammable material should be removed from along tracks for at least fifty feet on either side.

Railroads—All of the above rules that are practical and possible of enforcement should be used by main line railroads as well as the logging railroads. If the proper officials of all railroads will issue



written instructions to their employees to carry out the provisions of the forest laws applicable to railroads a tremendous improvement can be made and many fires averted. Trackmen should be instructed to clean all rights of way at least twice per year of inflammable ma-



FOREST FIRE PREVENTION PLACARDS DISTRIBUTED BY THE CONSERVATION COMMISSION.

terial. Sufficient trackmen should be kept to promptly put out any fires that may occur along the rights of way. All locomotives should be equipped with proper screens to prevent the escape of sparks and hot cinders and with adequate devices to prevent the escape of fire

from ash pans, and a proper inspection should be made of all such devices at short intervals during the dry weather in both spring and autumn. Instructions should be issued to all engineers, conductors and all employees to report fires to the railroad agents as is required by law.

Persons Burning Brush—Before burning brush or clearing land, notify the fire warden. Burn brush in still weather or when the breeze is away from adjacent timber and towards open land. If possible, the best time is in cloudy weather just before a rain storm.

If there is a lookout station in your vicinity notify the lookout watchman so that he will know that you are going to burn your brush, as otherwise he will likely go to the trouble of summoning men to fight what he takes to be a forest fire. Always have plenty of persons close around when burning brush so that in case this fire escapes and gets into woodland you will be able to extinguish it.

Campers, Hunters, Fishermen, etc.—Be careful of your campfire. Never build your campfire larger than is needed, rake leaves and dry wood away from it, and in windy weather dig a shallow hole for it. Never build a fire against hollow logs or trees where it will be hard to extinguish. Never leave camp until you have entirely extinguished the fire with water.

Be careful with matches, cigar or cigarette stubs and burning tobacco, and never throw them where there will be any chance of their igniting leaves or wood.

Rural Mail Carriers—The Post-Office Department of the United States Government has requested all rural and star route carriers to notify the proper authorities when they discover a fire along their route, and fire warden should use every means to secure their hearty cooperation along this line.

Any suggestion as to a possible way to better the system will be given the most careful attention when sent to the Commission.

FINANCIAL STATEMENT OF CONSERVATION COMMISSION

July 1, 1916 to June 30, 1917

OPERATION

Appropriation Unexpended balance Refunds Total disbursements	\$200,000.00 2,683.97 28.50	\$202,657.47
Total dispursements	\$202,657.47	\$202,657.47
REPAIRS AND MAINTEN	ANCE	
Appropriation Unexpended balance Total disbursements	\$5,000.00 12.70	\$ 5,012.70
	\$5,012.70	\$5,012.70
PROPERTY AND IMPROVE	MENTS	
Appropriation	\$4,000.00 3.60	\$4, 003.60
	\$4,003.60	\$4,003.60
CLASSIFICATION OF DISBUR	SEMENTS	
Administration Forestry Parks Wardens Fisheries	\$27,990.21 19,580.98 9,914.20 110,813.28 43,375.10	
		\$211,673.77
ADMINISTRATION		
Salaries Traveling expenses Printing Supplies Postage Telephone and telegraph Express and freight Repair tag machine	\$18,721.30 2,649.64 4,167.54 558.25 1,132.22 514.66 243.25 3.35	
<u>-</u>		\$27,990.21

FORESTRY DIVISION

POREBITATION		
Salaries and labor. Supplies Equipment Improvements Repairs Employee's expenses Insurance	\$6,081.55 1,708.52 254.00 391.00 14.15 1,608.07 252.26	\$10,309.55
FIRE PROTECTION		
Salaries and labor. Employee's expense Supplies Equipment	\$6,645.10 1,299.35 1,304.93 22.05	
		\$9,271.48
PARK DIVISION		
PENINSULAR PARK	•	,
Salaries and labor Employee's expenses Supplies Equipment Improvements Repairs Advertising Insurance	\$1,881.50 10.44 321.35 410.25 512.50 1,236.20 63.18 137.60	\$4,578.02
DEVIL'S LAKE PARE	c	
Salaries and labor Employee's expenses Supplies Equipment Improvement Repairs Telephone Advertising Insurance	\$1,513.28 289.42 431.78 17.25 1,050.06 499.40 13.45 63.18 162.39	
		\$4,040.21
INTER-STATE PARK	-	
Salaries and labor	\$918.25 14.45 23.33 56.59 3.84	
		\$1,016.46
NELSON-DEWEY PAR	RK	
Salary and expense	\$134.51	
		\$184.51
•		

CUSHING PARK

-	\$150.00	
, =		\$150.00
WARDEN DIVISION	,	
Salaries Railroad fares Hotal expense Livery expense Other expense Equipment Auto and motorcycle supplies Launch and boat supplies Auto and motorcycle repairs Launch and boat repairs Gasoline and oil Game farm Improvements Phone Provisions and supplies S. P. Richtman (launch hire) Warden badges Index books Insurance	\$69,698.00 4,564.11 16,496.61 6,204.47 8,194.87 8,733.20 1,010.08 1,307.10 98.70 228.75 769.04 967.12 24.46 646.62 131.90 11.36 37.20 132.96	\$110,813.28
FISHERIES DIVISION	Ŋ	
Madison Hatchery Bayfield Hatchery Bayfield Hatchery Sturgeon Bay Hatchery Delafield Hatchery Wild Rose Hatchery Wild Rose Hatchery Minocqua Hatchery Minocqua Hatchery Spooner (Sub-Hatchery) Oshkosh (Sub-Hatchery) Tenney Park (Sub-Hatchery) Eagle River (Sub-Hatchery) Distribution of fish Collecting fish at Neenah dam Collecting pike eggs. Collecting pike eggs Collecting lake trout eggs State Fair exhibit. Survey trout streams.	\$5,077.78 8,617.90 2,698.76 2,649.66 5,267.93 4,17.74 2,074.73 167.25 194.84 4,940.49 492.55 2,960.62 40.07 1,016.87 826.05 89.77 123.85 542.51	
Research work (J N. Lowe)		\$43,375.10

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\$2,698.76

\$1,835.75 277.65 549.96 85.40

DELAFIELD HATCHERY

Salaries and labor	\$2,260.45 200.00 145.51 43.70	
=		\$2,649.66
WILD ROSE HATCHER	v	
Salaries and labor Fish food Equipment Supplies Repairs Phone	\$3,233.98 1,248.38 18.25 504.09 235.28 27.95	
_		\$5,267.93
·		
MADISON HATCHERY	7	
Salaries and labor. Fish food Equipment Supplies Improvements Repairs Barn supplies Phone	\$3,386.45 1,058.07 22.15 429.81 111.75 31.45 160.05 27.00	\$5,077.78
D. W. W. D. W. W. C. C. C. C. C. C. C. C. C. C. C. C. C.	_	
Salaries and labor Fish food Equipment Supplies Barn supplies Improvements Repairs Phone	\$5,400.55 946.15 209.51 988.70 165.40 348.35 521.85 35.31	
	•	\$8,615.90
SHEBOYGAN HATCHES Salaries and labor Supplies Water rent Improvements Repairs Phone	\$1,914.50 398.42 538.66 533.94 9.00 41.25	\$3,425.77
=		=======
MINOCQUA HATCHER	Y	
Salary and labor Equipment Phone Supplies Improvements Repairs Collection of breeders.	\$1,412.00 240.59 88.50 386.02 11.80 52.12 51.50	•
=	======	\$2,242.58 ========

SPOONER	HATCHERY

Labo r Supplies	\$140.00 277.74	
		\$417.74
OSHKOSH HATCHERY		
Labor Supplies Improvements Repairs	234.25 117.21 400.17 1,323.10	89 074 79
` =		\$2,074.73
TENNEY PARK HATCHE	RY	
Labor	\$50.00 117.25	
=		\$167.25
EAGLE RIVER HATCHE	• v	
Labor	\$121.00	
Supplies Phone	66.54	
=		\$194.34
DISTRIBUTION OF FIS	u	
Salaries and labor	\$668.75	
Employee's expenses Drayage Freight and express Supplies Car maintenance	2,458.27 1,633.93 42.99 62.62 66.29	
Phone	7.64	
=		\$4,940.49
•		
· RECAPITULATION		
RECAPITUDATION		
Salaries and per diem Expenses of all employees Supplies and equipment Printing Postage Fish food Freight and drayage. Insurance Telephone and telegraph Game farm Collection of breeders Advertising Property and improvements Repairs and maintenance		\$128,912.34 40,950.95 18,695.39 4,167.54 1,132.22 3,252.60 2,065.87 1,231.56 1,103.95 967.19 51.50 126.36 4,003.60 5,012.70
Grand total		\$211,673.77
Appropriation available for operation		\$202,657.47 4,003.60 5,012.70

PARK PURCHASE FUND

GOVERNMENT REFORESTATION Balance July 1, 1916	Balance July 1, 1916	\$12,695.46 3,892.00	\$8,050.00 8,537.46
Balance July 1, 1916	_	\$16,587.46	\$16,587.46
Receipts for year	GOVERNMENT REFORESTA	ATION	
GLENN PARK FUND \$4,818.10 \$4,409.87 408.23 \$4,818.10 \$4,818.10 \$4,818.10 \$4,818.10 \$4,818.10 \$4,818.10 \$4,818.10 \$6.96 \$6.96 \$6.96 \$6.96 \$6.96 \$6.96 \$6.96 \$6.96 \$6.96 \$1,120.60 \$	Receipts for year		
Balance July 1, 1916 \$4,818.10 \$4,409.87 Balance \$4,818.10 \$4,818.10 DEVIL'S LAKE PARK FUND Balance July 1, 1916 \$6.96 Disbursements \$6.96 \$6.96 FIRE LOSS BAYFIELD HATCHERY BARN Insurance on building \$900.00 Insurance on contents 220.60 Disbursements (rebuilding) \$1,120.60	·	\$11,985.15	\$11,935.15
Balance July 1, 1916	Balance July 1, 1916	\$4,818.10	408.23
Insurance on building	Balance July 1, 1916	\$6.96	
\$1,120.60 \$1,120.60	Insurance on building	\$900.00	\$1,120.60
	-	\$1,120.60	\$1,120.60



GOLF GROUNDS.



SVEN'S TOWER AND CLIFF. PENINSULAR PARK.

FINANCIAL STATEMENT

OF

CONSERVATION COMMISSION

July 1, 1917 to June 30, 1918

OPERATION	۱
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Emergency appropriation from operation fund 1918-19 Total disbursements 1917-18	2,142.00	\$201,121.55 1, 020 .45
	\$202,142.00	\$202,142.00
REPAIRS AND MAINTEN	ANCE	
Appropriation Total disbursements Unexpended balance	\$13,000.00	\$12.777.12 222.88
_	\$13,000.00	\$13,000.00
PROPERTY AND IMPROVE		•
Appropriation Total disbursements Unexpended balance	\$4,000.00	\$3,767.80 232.20
	4,000.00	\$4,000.00
CLASSIFICATION OF DISBUR	SEMENTS	
Administration Forestry Parks Wardens Fisheries Muskego dam repairs	\$83,448.83 18,080.44 11,180.50 108,604.82 46,174.63 177.25	
		\$217,666.47
ADMINISTRATION		
Salaries Traveling expenses Printing Supplies Postage Telephone and telegraph Express and freight Advertising	\$20,455.72 2,608.09 6,355.47 710.93 2,315.82 265.77 129.80	
		\$33,448.83

TYND	ESTR	V D	1371	SION	ľ
run	DOLD.	ı	1 V 1	DIUM	4

	Ī	FORESTRY DIVISION
87 004 99	\$3,583.65 1,185.88 957.02 1,042.67 845.40 318.66 31.15	Salaries and labor. Supplies Improvements Repairs Employee's expense Insurance Telephone
\$7,964.38		=
		FIRE PROTECTION
	\$6,106.44 1,510.81 2,469.96 28.85	Salaries and labor. Supplies Employee's expense Telephone
\$10,116.06		· _
		-
		PARK DIVISION
		PENINSULAR PARK
	\$1,649.70 677.17 147.42 1,656.28 188.45	Salaries and labor Supplies Improvements Repairs Insurance
\$4,319.02		=
	ς	DEVIL'S LAKE PARE
	\$1,221.17 90.68 561.13 40.57 2,034.38 15.80 208.41	Salaries and labor. Supplies Improvements Employee's expense Repairs Telephone Insurance
\$4,172.09		-
		=
	:	INTER-STATE PARK
	\$485.00 2.50 69.00	Salaries and labor Supplies Repairs
\$556.50		
		-
	RK	NELSON-DEWEY PAR
	\$856.50 86.75 1,046.85 117.99 25.80	Salaries and labor. Employee's expense Repairs Supplies Improvements
\$2,182.89		-

WARDEN DIVISION

Salaries Railroad fares Hotel expense Livery expense Other expense Equipment (Chap. 651-1) app. 1 Auto and motorcycle supplies Launch and boat supplies Launch and boat repairs Launch and boat repairs Casoline and oil Game farm Improvements Telephone Provisions and supplies. S. P. Richtman (launch hire and repairs) Insurance	\$70,148.50 3,938.59 16,425.12 7,121.66 3,722.50 1,000.00 2,062.87 451.36 55.95 326.15 957.70 726.76 325.83 360.85 168.44	\$108,604.82
FISHERIES DIVISIO	on .	
Madison Hatchery	\$6,376.90 8,300.77 2,977.10	
Sturgeon Bay Hatchery Delafield Hatchery Wild Rose Hatchery Sheboygan Hatchery Minocqua Hatchery Spooner (sub-hatchery)	2,588.53 6,209.42 6,216.28 2,423.08 234.72	
Spooner (sub-hatchery) Oshkosh Hatchery Tenney Park Hatchery Eagle River Hatchery Distribution of fish Collecting pike eggs Collecting lake trout eggs State Fair exhibit Survey trout streams	1,251.32 11.00 305.42 5,222.26 1,571.31 1,293.80 190.19 115.41	
Collecting fish at Neenah dam	887.12	\$46,174.63
STURGEON BAY HATCH	· ERY	
Salaries and labor Supplies Water rent Telephone Repairs Insurance	\$1,910.50 395.30 550.59 34.45 58.58 32.68	
=		\$2,977.10 =======
DELAFIELD HATCHER		
Salarles and labor. Supplies Telephone Improvements Repairs Insurance Drayage	\$2,098.75 119.62 44.40 30.00 220.70 33.59 41.47	
		\$2,588.58

WILD ROSE HATCHERY

Salaries and labor. Fish food Supplies Improvements Repairs Telephone Insurance Drayage	\$2,981.75 2,036.96 333.40 831.62 329.50 26.80 47.29 122.10	\$6,209.42
MADISON HATCHERY		
Salaries and labor Fish food Supplies Improvements Repairs Drayage Telephone Employee's expenses Insurance	\$3,169.75 1,306.93 334.13 65.00 1,242.13 140.00 27.00 8.38 83.58	
==	======	\$6,376.90
BAYFIELD HATCHERY		
Salaries and labor Fish food Supplies Barn supplies Improvements Repairs Telephone Insurance	\$4,092.70 1,654.05 829.30 141.73 909.11 546.75 48.88 78.25	·
		\$8,300.77
==		
SHEBOYGAN HATCHER Salaries and labor. Supplies Water rent Improvements Repairs Telephone Insurance	¥2,190.05 433.66 747.30 252.55 2,520.00 36.60 36.12	96 916 99
==		\$6,216.28 ====================================
MINOCQUA HATCHERY	7	Ť.
Salaries and labor. Telephone Supplies Improvements Repairs Collection of breeders Barn supplies Insurance	\$1,189.50 90.70 436.13 45.06 420.83 44.50 144.13 52.23	
==		\$2,423.08
SPOONER HATCHERY		
Labor	\$80.00 116.52 29.95 8.25	
==	======	\$234.72
·	D	igitized by Google

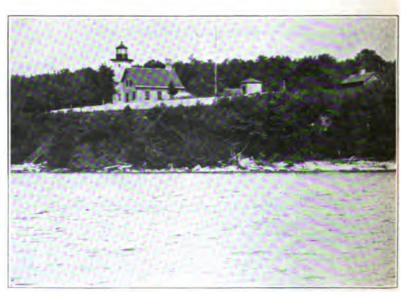
51.32
51.32
11.00
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====
90.19
87.12
98.80

RECAPITULATION

Salaries and per diem Expenses of employees Supplies and equipment Printing Postage Pish food Freight and drayage Insurance Telephone and telegraph Collection of breeders Game farm Muskego dam repair Advertising Property and improvements Repair and maintenance		\$125,071.18 41,016.26 15,296.04 6,355,47 2,315.82 4,997.94 2,245.65 1,421.58 1,323.30 44,500 726.76 177.25 129.80 3,767.80 12,777.12
Grand total	=	\$217,666.47
Appropriations available for operation		\$202,142.00 4,000.00 13,000.00
Total Disbursements	=	\$217,666.47 1,475.58
		\$219,142.00
PARK PURCHASE FUN	ND	•
Balance on July 1, 1917 Receipts for the year Disbursements Balance	\$8,537.46 3,341.19	\$7,500 00 4,378.65
-	\$11,878.65	\$11,878.65
GOVERNMENT REFORESTAT	ION FUND	
Balance on July 1, 1917 Receipts for year Disbursements Balance	\$7,493.15 4,485.45	\$8,025.22 8,953.38
	\$11,978.60	\$11,978.60
GLENN PARK FUND	•	
Balance July 1, 1917 Disbursements Balance	\$408.23	\$344.77 63.46
	\$408.23	\$408.23
FUND TO RELOCATE AMERICAN R	EFRACTORY	co.
Appropriation available July 1st, 1917 Appropriation available March 1 1918	\$5,000.00 25,000.00	·
Disbursements Balance	20,000.00	\$4,750.00 25,250.00
	\$30,000.00	\$30,000.00



CUTTING UP FALLEN AND MATURE TIMBER.



EAGLE LIGHT.

CLASSIFICATION OF RECEIPTS.

July 1, 1916 to June 30, 1917.

Nonresident Anglers' licenses	\$19,643.75 3,922.75
Lake Pepin, St. Croix & Miss. River licenses	8,115.75
Rough Fish (Winnebago county waters)	1,481.59
Rough Fish (Other waters)	6,688.29
Resident hunting licenses	123,999.40
Nonresident hunting licenses	11,960.00
Duplicate licenses	142.00
Settlers' licenses	507.00
Confiscations	3,079.57
Wardens' fees	1,078.89
Set line licenses ,	1,691.70
Game farmers' licenses—registration fees, etc.	2,011.82 2,342.00
Concession from park lands	1,550.00
Money held in trust (released) ,	2.188.07
Island leases and nursery stock sales	550.00
Nonresident clamming licenses	16.595.00
Fines imposed (Credited to School fund)	10,080.00
Total	\$202,547.08

July 1, 1917 to June 30, 1918.

Nonresident Anglers' licenses Lake Michigan, Superior & Green Bay licenses Lake Pepin, St. Croix & Mississippi river licenses	\$20,502.12 7,481.04 2,826.50
Rough Fish (Winnebago county waters) Rough Fish (Other waters)	1,083.80 15,276.55
Resident hunting licenses	108,330.50 6,400.50
Duplicate licenses	170.00 514.00
Confiscations	5,082.87 1,011.89
Set line licenses	1,302.15 1,213.17
Concessions from park lands	1,791,19
Island leases and nursery stock, land sales Resident trapping license	4,485.45 22,240.31
Nonresident clamming licenses Guides licenses	8,050.00 650.00
Beaver trapping licenses Deer tags Fines imposed (Credited to School fund)	250.00 5,359.34 33,453.34
Tetal	\$244.024.22





INVENTORY

FISHERIES DIVISION

Madison Hatchery 63 acres of land, 7 buildings, 17 ponds, 1350 feet of	
Tools and equipment	\$35,000.00 4,000.00
Bayfield Hatchery	
502 acres of land, 6 buildings, 26 ponds, 1500 feet	45 000 00
of raceway, 6700 feet of pipe line	45,000.00 5,000.00
Oshkosh Hatchery	
One city lot, hatchery building, boathouse and dock Tools and equipment	7,000.00 2,500.00
Delafield Hatchery	
30 acres of land, hatchery building, 6 ponds, 1490	97 000 00
feet of pipe line	27,000.00 1,500.00
Minocqua Hatchery	
275 1/2 acres of land, 5 buildings, 7 ponds, 2200 feet	
of pipe line	25,000.00 2,500.00
Wild Rose Hatchery	
59 1/2 acres of land, 5 buildings, 32 ponds, 1035 feet	
of pipe line	25,000.00 1,500.00
Sturgeon Bay Hatchery	
2 city lots and hatchery building	10,000.00
Tools and equipment	1,000.00
Sheboygan Hatchery	
City lot and hatchery building	10,000.00
Tools and equipment	1,000.00
Spooner Hatchery	1 500 00
City lot and building	1,500.00 700.00
Eagle River Hatchery	
City lot and building	1,500.00
Tools and equipment	700.00
Tenrey Park Hatchery	
Building	500.00
State Fish Car "Badger No. 2" Car shed at Wild Rose	13,500.00 1,500.00
Total	\$222,900.00
***************************************	\$444,500.00

WARDEN DIVISION

25 Motorcycles	\$2,500.00
Launch "Beda"	1,000.00
Launch "Anna S"	700.00
Launch "Kingfisher"	1,000.00
Launch "Wisconsin"	100.00
Launch "Kingfisher" Launch "Wisconsin" Launch "Mississippi"	200.00
Launch "Submarine"	100.00
Launch "Galatea"	2,500.00
14 detachable outboard motors	700.00
15 rowboats	350.00
Automobile	1,200.00
4 Ford cars	1,900.00
Total	\$11,750.00
STATE PARKS DIVISION	
Devil's Lake Park	
Buildings	\$20,350.00
1080 acres of land	140,747.00
Peninsula Park	•
Buildings and two lookout towers	17,255.00
	96,182.00
3190 acres of land	30,182.00
Marquette Park	
Buildings	1,160.00
1671.08 acres of land	46,139.00
Interstate Park	
Buildings	400.00
580 acres of land	20.571.00
	20,012101
Cushing Memorial Park 8 acres of land	5,000.00
Total	\$347,804.00
	,,
FORESTRY DIVISION	
Buildings	\$28,690.00
4 Steel lookout towers	550.00
86 miles of telephone line	3,500.00
Trout Lake Nursery (land improvement, etc.) water	
system, equipment	4.700.00
Tomahawk Lake Nursery (land improvements, water	•
system, equipment, etc	2,600.00
Nursery stock (Trout lake)	3,924.50
Nursery stock (Tomahawk lake)	1,100.00
Implements, tools and equipment	4,500.00
2065 acres of forest plantations	13,400.00
_	
Total	\$62,964.50
Recapitulation of Inventory	
Fisheries Division	\$222,900.00
Warden Division	11,750.00
State Parks Division	347,804.00
Forestry Division (lands not included)	62.964.50
-	
Grand Total	\$645,418.50

1TEMIZED STATEMENT OF ARRESTS FROM JULY 1, 1916-17 AND JULY 1, 1917-18

	July 1, 1916, to July 1, 1917	July 1, 1917, to July 1, 1918
Resident hunting without a license	32	74
Nonresident hunting without a license	1 34	47
Killing and having doe in possession. Venison in possession in closed season	38 36 19	81 14
Hunting more than one deer	7 17	4 29
serving venison in camp to boarders	1 20	7 29
Unlawful methods of fishing Using fish trap Datching and retaining undersized fish Selling, catching and having game fish in possession in closed	77 7 19	80 8 16
season Catching game fish with a dip ret. Shipping more than legal limit of fish.	43 16 8	84 9 2
Hegal transportation of game fish		11 17
Unlawful fishing within 200 feet of a dam. Unlawful use of set lines. Unlawful use of nets and seines.	18 26 169	3 42 174
Fishing without license, outlying waters	3 1 9	5 1
Hunting and killing game birds in closed season. Exceeding bag limit of game birds. Shooting ducks from motor boat.	8	81 1 4
Shooting ducks in open water	58 85	39 12
Buying and selling game birds. Killing harmless birds or disturbing birds' nests. Killing rabbits and squirrels in closed season.	18 23 13	1 2 12
Hunting rabbits with a ferret Trapping in closed season	38	8 46
Trapping without g license Trapping beaver or having beaver skins in possession Possessing otter or otter skins	6	34 12 2
Shooting and spearing of muskrats or mink Molesting muskrat houses or trapping therein, Possessing green hides or furs in closed season.	9 16	5 27
Killing raceoon in closed season	7 2	3 4
Depositing deleterious substances in streams	5	2 1 16
Nonresident fishing without a license		
llegally carrying guns in vehicles. Exceeding bag limit of fish. Using set gun to kill deer. Making false affidayit to obtain license.	2	8 1 8
Leaving camp fire burning		1 7
Leaving camp fire burning. Gulding without license. Illegal shipping of fur. Killing bear in closed season. Transferring license. Hawlen der bide in red coet in recession.		2 1 1
Allen procuring hunting Heense		2
Using decoy ducks without tags. Shooting wood duck. Catching frogs out of season.	1	2 1
Killing or having moose meat in possession. Fishing on State hatchery grounds.	9	

	July 1, 1916, to July 1, 1917	to
Fine sentences imposed. Jail sentences imposed. Both fine and jail sentences imposed. Cases pending Acquittals Cases dismissed Fines suspended on payment of costs Both fine and costs suspended. Placed on parole or probation. Juvenile court, reprimanded Indefinitely postponed	39 3 18 29 38 59 16 20 5	610 39
Transmission beautiful and a second s	902	919

AMOUNT OF FINES AND COSTS IMPOSED ACCORDING TO COUNTIES, FROM JULY 1, 1916 TO JULY 1, 1917

- 10	Fines	Costs		Fines	Costs
	000 00	\$36.65	Marquette	55.00	22.00
Adams	\$75.00	86.23	Milwaukee	115.00	37.80
shland	310.00	151.89	Monroe	75.00	9.96
Barron	690.00		Oconto	220.00	24.04
Bayfield	460.00	109.80	Oneida	895.00	164.18
Brown	906.66	220.12	Outagamie	240.00	62.65
Suffalo	25.00	2.50	Ozaukee	25.00	9.75
Burnett	445.00	44.48	Pepin	190.00	11.00
Chippewa	25.00	87.40	Pierce	15.00	1.62
clark	250.00	169.87	Polk	310.00	35.26
olumbia	45.00	23.24	Portage	225.00	57.50
rawford	70.00	5.95		310.00	51.50
ane	690.00	148.18	Price	5.00	1.82
odge	920.00	182.27	Racine	100.00	20.14
oor	75.00	19.63	Richland	160.00	25.15
ouglas	350.00	30.80	Rock	385.00	29.80
ounn	100.00	7.14	Rusk		
lorence	305.00	139.70	St. Croix	175.00	10.50
ond du Lac	455.00	108.72	Sauk	815.00	197.27
orest	100.00	21.55	Sawyer	120.00	28.70
Grant	25.00	2.90	Shawano	250.00	48.81
reen	50.00	3.61	Sheboygan	165.00	36.87
reen Lake	80.00	23.33	Taylor	830.00	89.17
	200.00	17.15	Frempealeau	60.00	16.93
owa	215.00	196.25	Vernon	65.00	11.47
ackson	75.00	22.63	Vilas	560.00	204.44
	.070.00	245.14	Walworth	196.00	87.00
efferson	150.00	36.00	Washburn	110.00	12.50
uneau	25.00	30.00	Washington	165.00	52.8 4
enosha	55.00		Waukesha	320.00	114.19
a Crosse		21.07	Waupaca	324.00	79.18
afayette	75.00	9.65	Waushara	340.00	67.40
anglade	450.00	73.02	Winnebago	290.00	53.18
incoln	475.00	119.05	Wood	25.00	2.50
fanitowoc	615.00	98.60			
farathon	175.00	41.36	Totals	\$16,595.00	\$4,237.00
darinette	430.00	225.87	1		l

Total amount of wardens' fees collected

41 070 94



AMOUNT OF FINES AND COSTS IMPOSED ACCORDING TO COUNTIES, FROM JULY 1, 1917, TO JULY 1, 1918.

	Fines	Costs	•	Fines	Costs
Adams	\$250.00	\$47.93	Marquette	50.00	15.00
Ashland	75.00	21.65	Milwaukee	120.00	11.47
darron	700.00	49,95	Monroe	100.00	5,40
Bayfield	615.00	52.04	Oconto	715.00	74.32
Brown	400,00	69.39	Oneida	2.265.00	333.95
Burnett	350.00	36.08	Outagamle	245.00	52.00
Calumet	150.00	50.75	Ozaukee	M. C C. C.	20.07
Chippewa	200,00	40.20	Pepin	50.00	3.50
lark	450.00	60.66	Pierce	50.00	1.00
Columbia	750,00	49.46	Polk	410.00	87.70
Crawford	460.00	143,95	Portage	250.00	78,31
Dane	1,250,00	186.48	Price		91.74
Dodge	915.00	144.44	Richland	250.00	90.27
000r	400.00	25,80	Rock	825.00	78.00
Donglas	875.00	96.74	Rusk	630,00	85.77
Eau Clairs	100,00	28.10	St. Croix	50.00	5.30
Florence	56.00	25.20	Sauk	500.00	106,09
Pond du Lac	2.085.00	463.51	Sawyer	325,00	28.25
Porest	550.00	94.90	Shawano	475,00	56.32
Frant	750.00	58.77	Sheboygan	650.00	145.65
reen	100.00	10.00	Taylor		22.82
Green Lake	800.00	108.94	Trempealeau	150.00	18.90
owa	250.00	25.39	Vernon	110.00	21,20
ron	135.00	42.15	Vilas	1,075.00	78.90
efferson	200.00	41.25	Walworth	725.00	99.87
uneau	650,00	98.22	Washburn	330.00	22,80
Kenosha	250.00	51.03	Washington	320,00	73.52
La Crosse	250.00	35.07	Waukesha	375.00	54.65
Lafayette	400.00	17.15	Waupaca	1,435.00	224.87
Langlade	1,650.00	286.59	Waushara	100.00	13,10
Lincoln	578.34	117.10	Winnebago	560,00	74.54
Manitowoe	600,00	70.83	Wood	100.00	24.31
Marathon	465,00	112.83	TOWN CHESTON AND AND ADDRESS OF	100.00	24.51
Marinette	1.085.00	402.44	Totals	\$88,453.34	\$5,254,63



THE OLD CHIMNEY LOCATES THE SPOT WHERE YEARS AGO A FISHERMAN Digitized by GOOG

CLASSIFICATION OF CONFISCATION.

	July 1, 1916, to July 1, 1917	July 1, 1917, to July 1, 1918
Doe carcasses Venison in closed season Venison without coupons attached Of live deer in closed season More than lawful amount of venison	39 31 6 1	28 10
Dogs, running deer. Deer heads or hides. Small game unlawfully in possession Beaver hides Otter hides	2 28 8 4 2	. 13 13
Illegal furs More than bag limit of ducks Wild ducks unlawfully in possession Fish in closed season Fish illegally transported	57 8 19 31	206 2 15 9 39
Fish illegally caught	50 65 113 10 3	38 30 118 12 1
Boats Guns Traps Spears Duck decoys	28 46 18 18	31 105 16 16 2
Rabbits and ferrets	6 1 3 2 2	4 4 18 5 3
Total number of seizures	603 \$3,079.57	750 \$5,082,87

BIENNIAL REPORT

STATEMENTS OF ARRESTS AND SEIZURES BY WARDENS.

W. E. Berg. Rhinelander 2 1	17-1918	1917-	1917	1916-		
M. L. Bersehens	s Seizur	Arrests	Seizures	Arrests	P. O. address	warden
d. L. Berschens Madfson 6 2 8 beorge Benett Tomah 4 2 12 J. H. Boomer Oshkosh 4 2 12 L. F. Bosworth Merrill 12 6 10 Onn Cadrant Green Bay 17 19 12 T. C. Buell Appleton 15 4 6 J. C. Bruell Appleton 15 4 6 J. C. Buell Appleton 15 4 4 4 V. A. Cole Vesper 4 7 7 J. M. Cranston Green Bay 16 15 14 4 V. A. Cole Vesper 4 7 7 16 18 9 16 16 16 18 14 18 18 16 16 16 18 19 19 12 18 18 18 18 15 19 19 12 18 18 18	. !				Dhinalandan	F F Dans
corge Bennett Tomah 4 2 12 F. Bosworth Merrill 12 6 10 0 0 0 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10	1					I Bareshove
B. Boomer	1.		. 4			gorge Reprost
F. Bosworth					Outhbook	H Boomer
Description 15 4 6	18				Marrell	F Bogmosth
C. Buell	20					ohn Cadrunt
B. Carter	8				Appleton	C Buell
A. Cole	1 4				Rica Lake	B Cartar
M. Cranston Green Bay 16 15 14 S. Curtis Viroqua 10 8 9 homas Devine Spooner 20 3 7 tetr Disdrich Milwaukee 22 54 5 A. Dockham Baraboo 19 6 51 Jin Egan Manitowoe 15 8 18 oward Fess Madison 35 5 9 W. Fisher Gillett 17 14 22 W. Foster Wausau 18 2 11 Juhn B. Fosnot Tomahawk 12 6 3 W. Gautsch La Crosse 10 6 5 T. Grey Ashland 11 5 16 C. Gruebner Sheboygan 19 21 20 J. Gwidt Rhinelander 29 13 39 W. Hall Darlington 8 1 15 eo. F. Hall Rubleon 28 7 17 A. Holmes Trempealean 2 9 2 andrew Hope Hammond 13 15 5 J. Hulbert Barron 6 3 17 C. Jakoubek Phillips 5 3 20 Outs Jeeke Fond du Lac 18 11 40 G. Keeler Bagley 4 3 4 Y. Kelssy Stevens Point 12 5 12 A. Keys Princeton 16 11 13 Bert Lee Luck 11 4 25 Luck 12 4 25 J. W. Passon Janesville 13 4 J. W. MacKenzie Antigo 19 9 56 J. W. Hould Rachen 17 8 9 P. Lanning Black River Falls 16 10 11 Bert Lee Luck 11 4 25 J. W. Powell Bayrior 2 5 5 J. W. MacKenzie Antigo 19 9 56 J. W. Powell Bayrior 2 5 5 J. Oberholtzer Eagle River 18 4 15 W. Powell Bayrior 18 4 16 W. Powell Bayrior 19 10 10 J. W. Powell 10 10 10 J. W. Powell 11 18 11 J. J. Bayrior 12 13 13 J. J. Shavet Ashland 10 22 8 J. J. Oberholtzer 2 6 3 J. J. Shavet Ashland 10 22 8 J. J. Shavet Ashland 10 22 8 J. J. Shavet Ashland 10 22 8 J. J. C. Trichand Waupaca 7 1 25 J. J. C. Trichand J. J. J.	3		7			A Cole
S. Curtis Viroqua 10 8 9	18		15		Green Ray	M Cranston
Spooner Spoo	8				Virogua	S Curtie
Section	2	2				
A. Dockham Baraboo 19 6 51 Dinn Egan Manitowoe 15 8 16 Waraf Fess Madison 35 5 9 W. Fisher Gillett 17 14 22 W. Foster Wausau 18 2 11 Inn B. Fosnot Tomahawk 12 6 3 W. Gautsch La Crosse 10 6 5 T. Grey Ashland 11 5 16 C. Gruebner Sheboygan 19 21 20 J. Gwkit Rhinelander 29 13 39 W. Hall Darlington 8 1 15 So. F. Hall Rubicon 28 7 17 A. Holmes Trempealeau 2 9 2 Adrew Hope Hammond 13 15 5 J. Hull Wittenberg 10 1 T. F. Hull Wittenberg 10 1 C. Jakoubek Philips 5 3 20 Ouis Jeske Fond du Lac 18 11 40 G. Keeler Bagley 4 3 4 V. Kelsay Stevens Point 12 5 12 A. A. Keys Princeton 16 11 13 Re Kleist Kenosha 17 8 9 P. Lanning Black River Falls 16 10 Intert Lee Luck 11 4 25 A. Miller Boscobel 12 9 9 B. McNaughton Superior 2 5 9 W. MacKenzie Antigo 19 9 56 A. Miller Boscobel 12 9 9 B. M. Manghton Superior 2 5 9 W. MacKenzie Antigo 19 9 56 A. Miller Boscobel 12 9 9 B. M. Maughton Superior 2 5 9 B. Nolan Twin Bluffs 6 3 5 D. Poolt Superior Eagle River 18 4 16 D. Poolt Superior Eagle River 18 4 10 D. Randall Waupaca 7 1 25 D. Poolt Superior 10 1 4 Tank Russell Park Falls 15 13 A. Handra 17 17 18 M. Soule Ladysmith 18 1 10 C. Pritchard Winneconne 1 2 G. Friedmann Thorp 8 11 5 M. Tuttle Oconomowoc 18 5 11 M. Puttle Oconomowoc 18 5 11 M. Puttle Oconomowoc 18 5 15 W. Puttlet Whiteweber 33 5 15 W. Puttlet Whiteweber 33 5 15 W. Puttlet Whiteweber 33 5 15 W. Puttlet D	20				Milwankoe	
Ship Egan	1 20					A Doekham
Marie Fess. Madison 35 5 9	17					
W. Fisher	, 5					ward Fore
Watshift 18	24					W Fisher
hn B. Fosnot					Wanger	W Poster
W. Gautsch. La Crosse 10 6 15 16 17 16 17 16 17 17 17	· 3				Tornahuwh	bn B Foenot
T. Grey					Le Crosse	W Cantach
G. Gruebner Sheboygan 19 21 22 29 13 39 W. Hail Darlington 28 7 17 15 15 15 15 15 15	19		2		Ashland	T Gree
J. Gwidt Rhinelander 29 13 39 W. Hall Darlington 8 7 17 A. Holmes Trempealeau 2 9 2 Jadrew Hope Hammond 13 15 5 I. Hulbert Barron 6 3 17 P. Hull Wittenberg 10 1 17 P. Hull Wittenberg 10 1 17 C. Jakoubek Phillips 5 3 20 G. Keeler Bagley 4 3 4 V. Kelssy Stevens Point 12 5 12 A. Keys Princeton 16 11 13 Re Kleist Kenosha 17 8 9 P. Lanning Black River Palls 16 10 11 bert Lee Luck 11 4 25 S. Little Stanley 8 1 19 Jul Long Mellen 5<	22				Chehoman	C Cenalman
W. Hall	16				Phinalandar	I Coulde
S. P. Hall	83					DE Wall
A Holmes Trempealeau 2 9 9 2 2 and afrew Hope Hammond 13 15 5 5 1	12		1 1		Darlington	W. Hall
Access	5				Transplant	A Wolmes
Hubbert Barron 6 3 17	8				Trempeateau	A. Hollies
F. Hull	1				Pammond	
C. Jakoubek	16	17				B. Dell
onls Jeske Fond du Lac 18 11 40 G. Keeler Bagley 4 18 11 40 G. Keeler Bagley 4 5 12 A. Keys Princeton 16 11 13 Re Kleist Kenosha 17 8 9 P. Lanning Black River Falls 16 10 11 bert Lee Luck 11 4 25 S. Little Stanley 8 1 19 ph Long Mellen 5 1 2 ph Long Mellen 5 1 2 ph Long Mellen 5 1 2 p. Mason Janesville 13 4 24 W. MacKenzie Antigo 19 9 56 A. Miller Boscobel 12 9 7 7 S. McNaughton Superior 2 5 7 7 B. Nolan					Wittenberg	C Televille
G. Keeler Bagley 4 3 4 3 12 12 5 12 A. Keys Stevens Point 12 5 12 A. Keys Princeton 16 11 13 18 11 13 18 18 11 13 18 12 11 14 25 12 11 14 25 12 11 14 25 12 11 14 25 12 11 14 25 12 13 4 24 14 44 14 14 14 14 14 14 14 14 14 14 14 14 14 14 14 14 14	2				Plant de T	C. Jakounek
V. Kels-y Stevens Point 12 5 12 A. Keys Princeton 16 11 13 Re Kleist Kenosha 17 8 9 Lanning Black River Palls 16 10 11 bert Lee Luck 11 4 25 S. Little Stanley 8 1 19 shul Long Mellen 5 1 2 .P. Mason Janesville 13 4 24 W. MacKenzie Autigo 19 9 56 M. Miller Boscobel 12 9 2 S. McNaughton Superior 2 5 15 S. McNaughton Superior 2 5 15 J. Oberholtzer Eagle River 18 4 15 D. Pool-r. Superior (East end) 8 4 15 D. Pooler. Superior (East end) 8 4 16 W. Powell	14				Pond du Lac.	C Voolen
A. Keys. Princeton 16 11 13 13 18 18 18 18 18	3				Bagley	U. Reeler
Re Keist	5				Stevens Point	V. Reissy
P. Lanning	10			10	Frinceton	Des Plaise
Dert Lee	65			17		Re Kleist
S. Little	14					r. Lanning
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M Mackenzie Antigo 19 9 58 A Miller Boscobel 12 9 92 B. McNaughton Superfor 2 5 15 B. Nolan Twin Bluffs 6 3 5 L. J. Oberholtzer Eagle River 18 4 15 D. Pooler Superfor (East end) 8 4 12 D. Pooler Superfor (East end) 8 4 12 D. Pooler Superfor (East end) 8 4 12 D. Pooler Superfor (East end) 8 4 15 D. Pooler Superfor (East end) 8 4 12 D. Pugh Racine 1 1 1 D. Pugh Racine 1 2 D. Pugh Racine 1 2 D. Pugh Racine 1 1 2 D. Randall Waupaca 7 1 25 D. Randall Waupaca 7 1 25 D. Randall Waupaca 7 1 25 D. Randall Wabeno 10 1 4 D. Russell Wabeno 10 1 4 D. Russell Wabeno 10 1 4 D. Randall Water 15 18 18 D. Water Ashinad 10 22 8 D. J. Shaver Ashinad 10 22 8 D. J. Shaver Ashinad 10 22 8 D. Water Menomonie 1 1 1 D. Water Wausau 14 1 20 D. C. Tiedemann Thorp 8 11 5 D. Water Drummond 5 2 15 D. Water Drummond 5 2 15 D. Water Drummond 5 2 15 W. P. Ellott Whitewater 33 5 15 W. P. Ellott Wittewater 33 5 15 W. P. Ellott Wittewater 33 5 15 W. P. Ellott Wittewater 33 10 W. P. Ellott Wittewater 34 10 W. Witter Wittewater 34 10 W. P. Ellott Wittewater 34 10 W. P. Ellott Wittewater 34 10 W. M. Soule Water Wittewater 34 10 W. W. M. W. W. W. W. W. W. W. W.					Menen	D M.
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B. Nolan Superior 2 5 5 5 5 5 5 5 5 5	48					. W. Mackenzie
B. Nolan					Boscobel	A. Miller
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D. Pooler. Superior (East end) 8	1				Twin Bluns	B. Nolan
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G. Rüssell Wabeno	12				Waupaca	D. Kandall
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M. Soule	19				Marinette	enton Smith
Secretary Fig. Secretary 11				Ashland	d. Shaver.	
L. F. Swant. Menomonis 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	6				Ladysmith	a. M. Soule
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C. Thorne Wausau 14 1 20 1 1 20 1 1 20 1 1 20 1 1 20 1 20 20	3					. F. Swant.
F. M. Tuttle. Oconomowoc 18 5 11 F. D. Worden Plainfield 30 9 27 V. W. Wisner Drummond 5 2 1 W. P. Elliott Whitewater 38 5 15	14					C. Thorne.
L. M. Tuttle. Oconomowoc 18 5 11 L. D. Worden Plainfield 30 9 27 V. W. Wismer Drummond 5 2 1 W. P. Elliott Whitewater 38 5 15	6	5			Thorp	L. C. Tledemann.
D. Worden Plainfield 30 9 27 V. W. Wismer Drummond 5 2 1 1 V. P. Elliott Whitewater 33 5 15	1	11	5		Oconomowoc	M. Tuttle
V. W. Wismer Drummond	18		9	30	Plainfield	D. Worden
W. P. Eillott Whitewater 33			2		Drummond	V. W. Wismer
	5		5	33	Whitewater	W. P. Eillott.
s. O. Hulbert Barron 9			5	9	Barron	t. O. Hulbert
Brues P. Westcott Kewaskum 7 1 2 L. B. Cook Star Lake 8	1	2			Kewaskum	Bruce P. Westcott

STATEMENTS OF ARRESTS AND SEIZURES BY WARDENS Continued.

	D C -11	1916	-1917	1917–1918				
Warden	P. O. address	Arrests	Seizures	Arrests	Seizures			
E. M. Weaver	Woodruff	9	7	17				
James C. Justensen	Trout Lake	4	· comments	2	- 3			
ra G. Smith	Green Bay	6	5	· · · · · · · · · · · · · · · · · · ·				
ames J. Justensen	Wild Rose	11	. 5	1	4			
Frank J. Long	Sayner	1	6	2	*******			
lenry Freund	Boulder Jet,	1	2	3	1			
Roy O. Buck	Manitowish		2	received the	1			
W. S. Johnson	Winneconne		1					
Lloyd D Mitchell	Ripon		********	9	4			
onis Volis	Larson		********	5	5			
C. Clemens	Durand	energia in	********	1	2			
John A. Hill	Ripon			12				
H. H. Barker	Clinton	********	********	1	1			
W. T. Sparks	Lodi		********	5	5			
Hans Hendrickson	Two Rivers			1	2			
K. T. Knudtson	Poynette			2	2			
Ed. Apel	Marion				.8.			
C. D. Neff	Pelican Lake			2	1			
Unclassified				ACCOUNT.	43			
	Total	902	588	919	707			



WOODS AVENUE. MANY PLACES THE TREE TOPS REACH ACROSS THE ROAD.

Forestry

SD

BIENNIAL REPORT

WE

1919-20

OF THE

cop 2

STATE CONSERVATION COMMISSION

OF WISCONSIN

FOR THE

Fiscal years ending June 30, 1919, and June 30, 1920



MADISON, WISCONSIN

Democrat Printing Company, State Printer
1919

BIENNIAL REPORT

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MADISON, WISCONSIN

Democrat Printing Company, State Printer
1919



COMMISSIONERS

W. E.	BARBER, ChairmanTerm	expires	February,	1925
C. L.	HARRINGTONTerm	expires	February,	1923
JAMES	NEVINTerm	expires	February,	1921
	R. S. SCHEIBEL	Secreta	ru.	

Wissonein Creews, Come. 1+ 3- 28-1924

LETTER OF TRANSMITTAL

HONORABLE EMANUEL L. PHILIPP,

Governor of Wisconsin.

SIR: In conformity with law, we have the honor to transmit the report of this department for the biennium ending June 30, 1920.

Respectfully submitted,

W. E. BARBER,

JAMES NEVIN,

C. L. HARRINGTON,

Commissioners.

R. S. SCHEIBEL, Secretary.

Protect the Fish and Game by Preserving the Forest Cover



Help?

DIG YOU PUT OUT YOUR EAST FINE

One Tree Will Make a Million Matches; One Match Will Destroy a Million Trees

WISCONSIN CONSERVATION COMMISSION United States Forest Service

WANTED

Campers who prevent forest fires.

WISCORDIN CONSERVATION COMMISSION

FOREWORD

The State Conservation Commission as now organized has been in existence a little less than six years. The report of the commission herewith presented is, therefore, its third biennial re-In presenting it the members of the commission believe it to be fitting that they express their high appreciation of the cordial support and cooperation which has been given their work by the public. Beyond their most sanguine expectations the people of the state have manifested an interest in and a sympathy with every effort made by them along their different lines of activity, which augurs well for the future of conservation. A recent illustration of this is found in the hearty support given the commission in its reinstatement of the one-buck law, and the prohibiting of the taking of muskrat and mink. Not only were the commission's orders strictly obeyed, but there was actively manifested an earnest desire on the part of all the local fish and game associations to assist the commission in conserving the wild life of the state. The commission closes its third biennium, therefore, with feelings of gratitude toward the public whose servant it is, and with high hopes for the future of conservation work in the state.

WILD LIFE CONSERVATION

W. E. BARRER

The warden division emerged from the war period with the earmarks of having suffered to some extent from the various excesses incident to the general upheaval and unbalancing of all lines of industry.

In our last biennial report we listed the names of the conservation wardens who were in the U. S. service, having volunteered their services in the world war. We are gratified to report that all have since returned and are again on the force.

Most of the upheaval occasioned by the war has been overcome excepting, the unusual drain upon our appropriation occasioned by the advance in the cost of living, necessitating the raise of the salaries of our men to meet their living expenses. Every element entering into the activities of this division has gone up in price, such as rail-

road fares, hotel bills, gasoline and other incidentals, and in order to maintain our force and render anything like efficient service we were forced to exceed our appropriation. We desire to call your attention to the fact that none of the money appropriated to the conservation commission comes from the taxpayers of the state. This department is wholly self-sustaining. The law provides that all monies excepting fines, accruing to the conservation commission from the sales of licenses, confiscations, rough fish percentages, etc. shall go into the conservation fund for the use of maintaining the department.

We collected during our last biennium \$532,125.63 and our appropriations were \$467,000. Therefore, it will be seen that the taxpayers contributed nothing to the conservation commission.

During the last biennium under an act of the legislature we have started and established the Wisconsin Conservationist, a paper published bi-monthly, as an educational medium to arouse the people to the value of conserving our wonderful natural resources. Our first paper was published March 1, 1919, and we have at this writing 9,000 paid-in-advance subscribers. This paper is a valuable asset to the state in creating interest in this great work. It is a well-known fact that education is the one and only element that will solve this problem.

We have a warden force of 60 men at an average monthly salary of \$131.00. Eleven of the wardens have state-owned Ford cars and three have state-owned motorcycles. Most of the balance of the force are using their own cars, the state paying them & per mile for the miles actually traveled while in the service of the state.

Our experience has shown that it is economy for the state to furnish cars but the initial expense of purchasing them prohibits putting them in general use.

We have purchased two high-powered motor boats during the past two years for use on the Mississippi River and Winnebago waters. We are in need of additional cars and boats to be fully equipped to furnish efficient service.

There is a general improvement in game conditions excepting deer. The deer season of 1919 was disastrous. We estimated that 25,152 deer were killed that year. Partridge and prairie chicken have increased remarkably and it will be safe to open the season for a few days next year with a small bag limit.

Fur-bearing animals have decreased to an alarming degree through excessive trapping owing to the tremendous advance in prices of furs. The decrease in muskrat has become so alarming that the commission are holding hearings in the various counties, after which we will close the season for trapping this fall. We are giving the reports of the trappers for the past three years to show the extent of the decrease in muskrat. In 1917 we trapped 802,048; in 1918, 272,236; in 1919, 162,963. This shows an astonishing decrease in the number of rats and if we are to retain them as a fur-bearer it is absolutely necessary that the season be closed.

There has been a general decrease in all varieties of fur-bearers but it is most marked and alarming with the muskrat.

FISHERIES DIVISION

By James Nevin, Commissioner.

The demand for fry and fingerlings for stocking the many lakes and streams is growing from year to year. This demand will continue to grow notwithstanding the large number of fry that are planted in public waters every year. It is estimated that fifteen people go fishing nowadays where one person enjoyed angling twenty years ago. For some eighteen years Wisconsin has provided a closed season during the spawning period of all varieties of game fish in inland waters; the laws have also prohibited the use of licensed nets in inland waters and the only legal manner of taking such fish is with the use of hook and line.

One would naturally feel that our waters should be teeming with fish and that larger catches of game fish would be made. I know of lakes that contain an abundance of fish, but from which waters very few fish are taken with hook and line during the season.

The output of the fish crop from the several state hatcheries varies from year to year, depending upon weather conditions, which have just as much influence on the hatching of fish as they have on the collection of eggs and the number of eggs that are hatched. At this time the hatcheries at Bayfield, Sturgeon Bay and Sheboygan contain some 29,000,000 lake trout eggs which were collected from the waters of Lakes Michigan and Superior during the spawning season which has just closed. This number is about the average that is collected each year. The quality, however, is the poorest that we have ever taken. The percentage of fish that will be hatched from these eggs will be much less than the production of lake trout fry in former years.

The varieties of commercial fish that are being hatched by the state and planted in outlying waters are holding their own in the number of pounds of these varieties that are caught by commercial fishermen from year to year. Other varieties of commercial fish, the eggs of which are not propagated in the state hatcheries, are on the decrease. If funds were available for the collection of herring, chub and blue fin eggs the propagation of these varieties of fishes would largely increase the supply that is being taken from our outlying waters.

Although the new hatchery at St. Croix Falls has been in its infancy for the past two years the operation of this hatchery has been

the means of the building up of our other brook trout stations, so that we have more brook and brown trout coming on as stock fish than we have had at any time during the past twenty years. After another two years we will have a sufficient amount of brown and brook trout fry to supply all necessary requests for the stocking of available streams that should be supplied with these varieties of trout, and will be the means of keeping these streams in prime condition at all times.

The hatching of black bass under natural conditions throughout Wisconsin during the spring of 1920 was to my knowledge the greatest that the state has ever experienced. The weather conditions were ideal, which resulted in a splendid natural reproduction, and which will be of immense value to the fishing interests of the state.

It is estimated that 300,000 people from outside Wisconsin visited our state during the past summer, coming to Wisconsin because of the many beautiful lakes and streams within our borders. It is estimated that these people left in Wisconsin some \$7,000,000, and which estimate I believe is very conservative.

During the past two summers, in the months of July and August the commission has endeavored to examine as many spring water trout streams as possible in the several counties to ascertain the adaptability of the streams for the propagation and growth of trout of various kinds. The most essential thing is the temperature of the water during warm weather, the amount of water, and shade and hiding places for the protection of the fish. In the past there have been millions of trout planted in various streams which were wasted, the streams not being adapted for them. In this, we took every precaution to prevent it as far as we could, not knowing and judging by the application as filled out by the party wanting the fish for the stream. We have been limited for practical men to make a thorough examination to know what the requirements are for a spring water stream which is suitable for fish applied for, and which we will have on record in the office. In the future the streams in the counties will all be numbered, and when a man makes application for trout for a stream we will look up the number of the stream and see if said stream is adapted for the variety of fish that is asked for. Funds have not been available for us to make as rapid progress with the work as we would have liked.

Because of the high cost of labor and materials in connection with the work of the department it has been necessary to curtail expenses whenever and wherever possible. Much work was left undone because of the fact that \$2.00 would not accomplish as much work as \$1.00 would produce in former years. As the department must keep within the amount of money appropriated by the legislature for the administration of our several divisions, it was necessary to forego certain works of improvement which we would like to have undertaken.

STATE PARKS

By C. L. HARRINGTON, Commissioner.

The summer seasons of 1919 and 1920 brought an increasing number of visitors to the state parks. It was estimated that an average of 100,000 people spent some of their time on the Devils Lake area, alone, during each of these years. Improved roads have brought these public areas nearer and nearer to Wisconsin citizens, as well as to the tourists beyond our borders, and their increasing value to all has been greatly emphasized.

NEW AREAS ACCEPTED

Several years ago John A. Latsch offered to the state a tract of land bordering on the Mississippi near the village of Trempealeau for a state park and wild life refuge. This area of 2100 acres was finally accepted and now is unofficially called the Perrot State Park. The area is rich in historic and scenic value and will make a valuable addition to the state-owned public areas. About 900 acres are high land and form the park proper, while the balance is bottom land and comprises the Idlewild Game Refuge.

The commission also accepted the gift of 660 acres from the late Martin B. Pattison of Superior. This area is located at the falls of the Black River, twelve miles south of Superior. It is a natural camping and picnic point. The falls are the highest in the state, having a drop of 165 feet. This area is of the utmost importance to the state park system, located as it is near one of our large cities, and in a fast developing agricultural community. A large patronage to this area is assured. Wisconsin now owns eight state parks, including the above mentioned recently acquired areas.

Improvements on the state parks have progressed as rapidly as the funds available will permit. New roads have been constructed, old ones repaired and improved, better sanitary conveniences have been installed, fireplaces for campers have been built, new tent and cottage sites established, the water supplies have been enlarged through the drilling of wells, the construction of reservoirs, and the cleaning and curbing up of springs, places of scenic or historic interest have been suitably marked, trails and pathways opened up, railings built to protect pedestrians, several shops and storehouses

built, all improvements having in mind specifically the fundamental conveniences and comforts of visitors to these areas.

Improvements of particular importance are the construction of the concrete Warner memorial road, the installation of additional tollet facilities, and the final closing of negotiations for the removal of the American Refractories Company at the Devils Lake Park, and the commencement of a road building program which will increase in a marked way the accessibility of the Interstate and Peninsula parks.

Further improvements contemplated will be along the lines as indicated above. The particular needs of the parks of Wisconsin at the present time are to make them accessible by the construction of better roads and trails and to provide the ordinary conveniences that a visitor or tourist might expect to find on such, areas.

STATE LANDS AND FOREST RESERVES

Practically no changes have occurred on the state lands and forest reserves during the past two years. The work of protecting these properties against fire and trespass has been continued, and the commission has furnished the commissioners of public lands with all necessary information for the general administration of the school fund lands.

Improvements in the way of road and trail construction and maintenance have been conducted, trees planted, and work of a nature that would add definite values to these state properties has been carried on.

FINANCIAL STATEMENT OF CONSERVATION COMMISSION

July 1, 1918, to June 30, 1919

OPERATION

Available appropriation Refund Total disbursements 1918-1919 Unexpended balance	\$198,878.45 125.00	\$196-,882.29 2,121.16
	\$199,003.45	\$199,003.45
REPAIRS AND MAINTEN	ANCE	
Appropriation Unexpended balance Total disbursements Unexpended balance	\$13,000.00 222.88	\$11,447.75 1,775.13
,	\$13,222.88	\$13,222.88
PROPERTY AND IMPROVE	MENTS	
Appropriation Unexpended balance Total disbursements Unexpended balance	\$4,000.00 232.20	\$3,960.70 271.50
•	\$4,232.20	\$4,232.20
CLASSIFICATION OF DISBUR		
Administration Forestry Parks Wardens Fisheries Muskego and Wind Lake Dams	\$23,072.20 17.788.65 12,477.22 111,159.37 47,675.85 117.45	
		\$212,290.74
ADMINISTRATION		-
Salaries Traveling expenses Uninting Counties Postage Telephone and telegraph Express and freight Advertising	\$16,344.15 1,844.38 2,026.96 587.40 1,289.36 438.44 303.88 237.63	
		\$23,072.20

FORESTRY DIVISION

FORESTRI DIVISION		
Salaries and labor	\$3,766.05	
Supplies	1,069.58	
Improvements	1,197.45 142.80	
Employee's expense	616.28	
Employee's expense	449.41	
-		97 941 07
		\$7,241.07
•		
FIRE PROTECTION		
Salaries and labor	\$5,761.10 1,290.29	
Employee's expense	3,496.19	
= ==	3,780.18	
		\$10,547.58
-		
WARDEN DIVISION		
Salaries Railroad fares	\$68,805.33 4,920.84	
Hotel expense	16.710.27	
Hotel expense	16,710.27 8,999.64	
Other expense	3,727.81	
Telephone	202.7 0	
Gas and oil	1,237.14	
Repairs	455.05	
Improvements Boat and auto supplies Boat and auto repairs	592.55 3,248.83	
Boat and auto repairs	679.16	
Game farm	679.16 387.20	
Game farm Motorcycle repairs	418.90	
Supplies and provisions	541.10	
Insurance	237.85	
=		\$111,159.37
FISHERIES DIVISION	,	
	•	
Madison Hatchery Bayfield Hatchery Oshkosh Hatchery	\$5,558.89	
Bayfield Hatchery	8,578.85	
Minocaus Astohery	747.42 2,607.31	
Minocqua Hatchery	3.164.15	
Wild Rose Hatchery	5,634.01	
Sturgeon Bay Hatchery	2,538.96	
Sheboygan Hatchery	3,232.38	
Spooner Hatchery	486.34 259.31	
Eagle River Hatchery	259.81 984.82	
Tenney Park Hatchery	180.77	
State Fair exhibit	118.77	
Distribution of fish	9, 468 .70	
Collecting lake trout eggs	766.26	
Collecting pike eggs	2,998.00 355.91	
Collecting pickerel eggs	355.91	
=		\$47,675.85
GLEN PARK FUND		
4 ————————————————————————————————————		
Unexpended balance	\$63.46	\$63.46
	\$63.46	\$63,46

GOVERNMENT REFORESTATION FUND

Balance on July 1, 1918	. 2,232.93	\$3,320.55 2,860.76
	\$6,181.31	\$6,181.31

REST LAKE CABIN (INSURANCE)

Balance on July Disbursements Balance	 ٠.		 									\$	\$ 2	, 1	l 4	2.:	29		٠.		, 2	; i	4/2	. 2	9	
										-	_	- 1	\$2	,	1,4	2.:	29	•		1	; 2	, 1	42	. 2	29	

FUND TO RELOCATE AMERICAN REFRACTORY CO.

Ralance July 1, 1918		\$25,250.00
	\$25,250.00	\$25,250.00

PARK PURCHASE FUND

Receipts Disbursements Balance	1,872.85	\$6.251.50
	\$6,251.50	

FINANCIAL STATEMENT OF CONSERVATION COMMISSION

July 1, 1919 to June 80, 1920

OPERATION

Appropriations Unexpended balance Refunds Total disbursements (1919-1920)	\$233,500.00 2,121.16 220.00	\$234,391.49
Unexpended balance		1,449.67
	\$235,841.16	\$235,841.16
REPAIRS AND MAINTEN	IANCE	
Appropriation Insurance Urexpended balance Refund Total disbursements	\$15,000.00 387.74 1,775.13 50.25	\$17,213.12
	\$17,213.12	\$17,213.12
PROPERTY AND IMPROVE	MENTS	
Appropriation	. \$10,000.00 271.50	\$10,271.5
	\$10,271.50	\$10,271.50
CLASSIFICATION OF DISBUF	RSEMENTS	
Administration Forestry Parks Wardens Fisheries	\$37,551.85 23,299.04 14,336.64 130,238.25 56,450.33	
		\$261,876.11
ADMINISTRATION		
Salaries Supplies Printing Postage Telephone Express, freight and drayage Traveling expenses Advertising	\$22,869.70 793.25 8,391.08 1,600.60 565.3 311.78 2,986.86 32.95	
7		\$37,551.85

FORESTRY DIVISION

Salaries and labor	
Supplies	
Employee's expenses	1,781.64
Repairs	5,431.13
Improvements	
Insurance	564.65

\$13,863.60

FIRE PROTECTION .

Salaries	\$5,191.85 912.76
Employee's expenses	3,780.34
Advertising	50.49

\$9,985.44

WARDEN DIVISION

Salaries	\$78,396.00
Railroad fares	4.990.43
Hotel expense	18,292.50
Livery expense	12,020.93
Other expense	3,577.56
Telephone	299.50
Auto supplies	3,284.13
Auto repairs	273.71
Provisions and supplies	1,792.18
Gasoline and oil	1,141.44
Boat supplies	475.37
Boat repairs	214.41
Insurance	223.26
Repairs	331.00
Improvements	4,092.31
Launch hire	282.84
Game farm	468.48
Advertising	82.20

\$130,238.25

FISHERIES DIVISION

30.11	
Madison Hatchery	\$8,766.67
Bayfield Hatchery	8.861.88
Oshkosh Hatchery	529.87
Minocqua Hatchery	2.826.78
thinocqua racchery	
Delafield Hatchery	3,597.42
Wild Rose Hatchery	6,095.44
Sturgeon Bay Hatchery	2,889.81
Sheboygan Hatchery	3.123.76
Special Hatches	492.03
Spooner Hatchery	
Eag'e River Hatchery	373.12
St. Croix Falls Hatchery	5,018.50
Tenney Park Hatchery	187.16
State Frie exhibit	186.88
State Fair exhibit	
Distribution of fish	9,325.19
Collecting lake trout eggs	666.68
Collecting pike eggs	2.211.11
Collecting pickagel aggs	77.54
Collecting pickerel eggs	
Survey of trout streams	281.25
Collecting fish at Neenah dam	939.79

\$56,450.33

CLASSIFICATION OF RECEIPTS

July 1, 1919 to June 30, 1920

Nonresident Anglers' licenses	\$42,098.53
Lake Michigan, Superior and Green Bay licenses	6,416.00
Lake Pepin, St. Croix and Mississippi River licenses	2.582.75
Rough fish (Winnebago County waters)	1,459.55
Rough fish (other waters)	28,653.27
Resident hunting licenses	145,956.00
Nonresident hunting licenses	13.850.00
Duplicate licenses	248.00
Settlers' licenses	943.00
Confiscations	7,372.31
Wardens' fees	1,289.77
Set line licenses	1.655.55
White fish and Cisco licenses, registration fees, etc	950.25
Concessions from park lands	2,980.08
Island leases and nursery stock	2.440.83
Resident trapping licenses	30.879.70
Nonresident clamming licenses	500.00
Resident clamming licenses	2,632.00
Guide licenses	534.00
Beaver trapping licenses	725.00
Deer tags	7.050.40
Fines imposed (credited to school fund)	36,992.50
Thes imposed (credited to school fund)	30,332.30
Total	\$338,209.49

CLASSIFICATION OF CONFISCATION

	July 1, 1918, to July 1, 1919	July 1, 1919, to July 1, 1929
Doe carcasses Venison in closed senson Venison without coupons attached.	12 21	3 37 5
Fawns	73	2 2
Deer careass, struck by train. Dogs, running deer. Deer heads or hides. Small game unlawfully in possession.	1 4 10	1 7 14
Beaver hides Otter hides Swans	9 3	14 4 2
Hlegal furs Wild ducks unlawfully in possession. Fish in closed season Fish illegally transported Sturgeon eggs	88 3 6 107	144 3 2 71
Fish illegally caught Fish undersized Illegal nets Set lines, ill gal Snag lines and fish traps	5 1 78 6 19	1 4 70 5 6
Automobiles Boats Guns Traps Spears Duck decoys	13 90 13 4 1	1 20 99 12 5 2
Mounted fawn Rabbits, ferrets and squirrels Wild birds other than game birds Headlights, jacks, bicycle lights, etc. Partridges Bear skins	10 1 14 2 6	1 68 8 5
Beurs Eagl's Prairie chickens	3	1 1 1
Total number of scizures	603 \$4,576.04	623 \$7,372.31

ITEMIZED STATEMENT OF ARRESTS FROM JULY 1, 1918-19, AND JULY 1, 1919-20

	July 1, 1918. to	to
	July 1, 1919	July 1, 1920
Resident hunting without a license	55 2	50
Nonresident hunting without a liceuse	36	52
Olling and having doe in nossession	2 60	
Venison in possession in closed season. Buying and selling venison.	14	41 17
	2	2
Hunting deer with dogs or having dogs in camp 8-rving venison in camp to boarders	9 1	20 1
Dynamiting fish	16	7
Unlawful methods of fishing	80 7	49 3
Catching and retaining undersized fish	1.7	22
Selling, catching and having game fish in possession in closed season	47	49
Catching game fish with a dip net	16	1 3
Catching game fish with a dip nct	4	
illegal transportation of game fish	10 1	12
Unlawful fishing within 200 feet of a dam	11	, 7
Unlawful use of set lines	29 24	19 50
Unlawful transportation of game	5	9
Tulawful transportation of game Hunting and killing game birds in closed season. Exceeding bag limit of game birds.	$\frac{23}{3}$	56 1
Shooting ducks from motor boat	1	3
Shooting ducks in open water	8	27 25
Buying and selling gaine Dirds		3
Killing harmless birds or disturbing birds' nests	9	5
Killing rabbits and squirrels in closed season	22 26	9
Trapping in closed season	37	57
Trapping without a license	20 8	2 <u>2</u> 15
Possessing ofter or ofter skins	6	4
Shooting and spearing of muskrats or mink	7 8	2 10
Possessing green hides or furs in closed senson	14	63
Killing raccoon in closed season	ı 1	2 1
Depositing deleterious substances in streams	'	, 5
Nonresident fishing without a license	16 10	31
Exe-ding bag limit of fish	1	4
Exe-ding bag limit of fish. Making false affidavit to obtain license	1	
Guiding without license. Killing bear in closed season.	7	2
Transferring license Having deer hide in red coat in possession	3	
Alich procuring hunting licanse	2	2
	, 4	2
Bishing in reserve waters.		
Kiling fawa	2	î
Fishing in trout streams. Hunting mink with dog	13	
Hunting on wild life refuge	1	2
Hunting on posted lands. Placing out poison without notice	ā	
Nutresident elementar without license	1 1	2
Resident clamming without license	3	6 2
Shining days	, ,	1
Shooting from auto		$\frac{2}{2}$
Shooting in state parks	1	1
Shooting in Frate parks Shooting grebe Trapping ducks		2
rating ducks Killing swan Serving gaine birds	!	3
Total.	739	835

STATEMENTS OF ARRESTS BY WARDENS

Warden	P. O. address	1918-1919	1919-1920	
		Arrests	Arrests	
Edward Apel	Marion	10	•	
I. H. Boomer	Oshkosh		3 2 7	
E. F. Bosworth	Merrill	20	7	
John Cadrant	Green Bay	.7		
W. A. Cole	Rice Lake. Vesper	18	8 12	
D. M. Cranston	Green Bay	3	14	
P. S. Curtis	Viroqua	4	à	
Thomas Devine	Spooner	11	6 5	
F. A. Dockham	Baraboo	30	18	
John Egan Edward Fess	Manitowoc	i	14	
Edward Fess	MadisonOconto Falls	42	30	
F. W. Fisher	Wausau	14 20		
J. W. Foster	Tomahawk	. 8	25	
E. W. Gautsch	La Crosse	6	25 7	
E. W. Gautsch. W. T. Grey H. C. Gruebner.	Ashland	24	12	
S. J. Gwidt	SheboyganRhinelander	17	25 40	
A. W. Hall	Darlington	13	22 12	
Geo. F. Hall	Rubicon	4 2	12	
G F Hull	Wittenberg		2 3	
G. F. Hull K. C. Jakoubek	Phillips	' 7 i	16	
Louis Jeske J. G. Keeler	Sturgeon Bay	19	10 6	
J. G. Reeler.	Bagley	14	13	
J. V. Kelsey W. A. Keys	Princeton	12 1	9	
Mike Kleist B. P. Lanning	Medford	. 17	14	
Albert Lee	Luck	· i7	13	
C S. Little	Stanley	5	13 7	
W. P. Mason	Janesville	13 52	17 55	
G. A. Miller	Boscobel	6		
Jas. McNaughton	Superior	9	20	
H. J. Oberholtzer W. D. Pooler	Eagle River	85	27	
A. W. Powell	Bayfield	! 7	5 9	
John Pugh	Racine	' 2	1	
Valentine Raeth	Milwaukee	' 12 '	ıí	
F. D. Randall S. P. Richtman	Fountain City	. 4	-i	
Frank Russell	Park Falls	14	14 17	
Denton Smith	Stoughton	29	16	
I. M Soule	Ladysmith	16	7	
M. F. Swant.	Menomonie	12 2	2	
M. C. Thorne	Thorp.	ا ۋ ا		
E. M. Tuttle	Oconomowoc	13	41	
J. D. Worden	PlainfieldDrummond	ā	1 3 10	
E. M. Tuttle	Whitewater	20	27	
G. O. Mulbert	Barron	10	27 25 28	
A. R. Brunet, W. P. Olawson	Fond du Lac	12	28 1	
Barney Daving	Wausau	: ::::::::	â	
Earl Hilliker	Tunnel City	4	8	
Erank Hornbarg	Lone RockStevens Point		9 1	
Ralph Hood. Frank Hornberg. C. C. Cowles.	Shawano		12	
Arthur Tic	Shawano	2	4	
Wm. Barhart		i		
A. L. Fletcher	l	Ī	•••••	

STATEMENTS OF ARRESTS BY WARDENS-

Continued.

	D () -33 (*	1918-1919	1919-1920	
Warden	P. O. address	Arrests	Arrests	
E. M. Weaver	SaynerRipon	4 2 1 9	8 4 2 9	
	Lodi	10	12 1	
B. M. Bailey	Ashland Marinette	1	4	
Frank Kaiser		1	4	
derman Schwarge	Total	739	835	

INVENTORIES

	June 30, 1919	June 30, 1920
Land and land improvements. Structures and attached fixtures. Machinery and equipment. Purniture and furnishings. Took and sundry equipment Live stock Materials and supplies.	2,500_00 2,535.00 375.00	\$490,000.00 155,374.00 62,371.80 3,800.00 3,000.00 800.00 1,800.00
Totals	\$651,964.50	\$717,145.80

ACREAGE OF STATE LANDS UNDER CONTROL OF COMMISSION

Eleven Hatcheries	935.77
Devil's Lake Park	1,113.20
Nelson Dewey Park	1,651.00
Peninsula Park	3,190.00
Inter-State Park	580.00
Pattison Park	690.00
Perrot Park	910_00
Brule Park	4,221.70
Oushing Memorial Park	8.00
State Game Farm	700.00
Forest County Game Refuge	18,000.00
Idlewild Game Refuge	1,100.00
Government Reforestation Grant	14,027.43
*Acreage Purchased by Forestry Board	
Government Grant of Unsurveyed Islands	875.14
Total acreage	206,995.79

^{&#}x27;Jointly with Land Commissioners.

AMOUNT OF FINES AND COSTS IMPOSED ACCORDING TO COUNTIES, FROM JULY 1, 1918, TO JULY 1, 1919

	Fines	Costs	1	Fines	Costs
	'				
Adams	\$310.00	\$20.02	Marin tte	\$700.00	\$147.45
Ashland	800,00	91.39	Marquette	50.00	1.30
Barron	570,00	27.95	Milwaukee	460.00	75.15
Bayfield	500,00	29.01	Monroe	200.00	13.82
Brown	750.00	90.45	Oconto	250,00	23.60
Buffalo	25,00	1.00	Oneida	1,320.00	238.19
Burnett	100.00	14.35	Outagamie	210.00	22.20
Calum t			Oznukce	450.00	82.54)
Chippewa	50_06	11.00	Pepin		.
Clark	505,00	148.03	Pierce	150.00	2.25
Columbia	50,00	3.70	Polk	500.00	41.14
Crawford	150.00	33.67	Portag	1.0 0.00	
Dane	2,850.00	221.28	Price	550,00	
Dodge	150,00	26.70	Racine	200.00	17.09
Door	1.335.00	147.25	Richland	100.00	18-67
Douglas	510,00	10.98	Rock	700,00	27.40
Dunn	100,00	9.70	Rusk	950,00	28.16
Eau Claire	100.00	23.70	St. Croix	500,00	12.50
Florence	210,00	11.00	Sauk	• 70°,00	132.43
Fond du Lac	750,00	202.73	Sawyer	8.45,00	31.73
Forest	625,60	115.60	Shawaro	\$05,00	58.43
Grant	250,00	9.15	Shebovgan	505.00	110.07
Green			Taylor	250.00	16.63
Green Lake	600,00	95.16	Trenmealeau	100 (K)	5.77
lowa	150.00	20.50	Vernon	3.0.00	33.96
Iron	541.00	61.54	Vil 18	1.350 00	143 8
Jackson	50.00	50.00	Walworth	1 (Mgs (N)	131.3
Jefferson	100.00	39.80	Washburn	370 00	21 2
Juneau	350,00	139.38	Washington	50,00	10.6
Kenosha	50,00	8.42	Wank sha	450.00	29.4:
Kewaunee			Wampaca	N/07,000	92.5
La Cross	250,00	25.56	Waushara	100.00	10.0
Lafayette	45(-(1)	27_0)	Winnebago	550,00	63.76
Langlade	1,255.00	168.24	Wood	175.00	21.9:
Line In	1,095.00	190.03			
Manitowoe	350,00	6.95	Total	33,956,00	\$4,116.65
Marathon	550,00	172.26	Total amount of war-		•
		,	dens' fees collected		\$1 140 1

AMOUNT OF FINES AND COSTS IMPOSED ACCORDING TO COUNTIES FROM JULY 1, 1919, TO JULY 1, 1920

	Fines	Costs		Fines	Costs
dam≼	\$150,00	87.50	Marquette		
shland	665.00	20.25	Milwaukee	50,00	48.40
Sarron	1.850.00	112.99	Monroe	100,00	11_1
lavfield	1.150.00	111.47	Oconto	975,00	127.5
rown	600.00	141.45	Oneida	1,542.50	240.9
ole fluid	50.00	3.00	Outagemie	50,00	6.7
enrnett	50.00	11.07	Ozaukce	350,00	81.0
'rium t	75.00	8.80	Pepin	50.00	2.0
hiprwwa	900.00	61.00	Picree	50,00	11.4
lark	400.00	35.46	Polk	350.00	48.3
obimbia	300.00	19.45	Portage	520,00	209.5
rawford	450.00	32.90	Price	1.100,00	118.2
ane	1,300.00	220.88	Racine	310.00	77.7
Yordgo		44.35	Richland	200,00	13.7
700r	270.00	43.45	Rock	700.00	62.7
ouglas	1.065.00	30.28	Rusk	500.00	41.7
unn	1.000.00	047.247	St. Croix		6.5
av Claire	• • • • • • • • • • •		Sauk	700.00	236.3
Torence	210,00	18,20	Sawver	350_00	50.7
ond du I ac	1.610 00	368.20	Shawano	920,60	128.0
orest	200.00	26.73	Sheboygan	455,00	52.5
rant	700.00	78.10	Taylor	700,00	53.7
iren	700,00	87.75	Trempeal an	955 (0)	17.7
reen Lake	110.00	7.72	Vernou	300.00	99.6
OWA	100.00	9.75	Viles	1 135,60	132.0
ron	750,00	119.33	Walworth	1.150,00	145.3
ackson	150.00	10.10	Washburn	270.00	14.7
lefferson		53.44	Washington	100.00	8.9
luneau	220.00	09.08	Wankesha	1,600,00	99.6
Schoola	250.00	23.10	Wanbact	\$65.00	302.5
Kewaunee	350.00	21.74	Waushara	255,60	16.6
La Crosse	300,00	37.46	Winnebago	770.00	33.7
afavette	300.00	15 00	Wood	605.00	109.0
larglade		212.00			
incoln	500,00	279.59	Total	\$36,992,50	85,052.7
Manitowoc	550.00	51.76	Total amount of war-		
Marathon		46.90	dens' fee- collected		\$1,289.7
Marinette		38.70	dens itt contection.	1	

SHIPMENTS OF TREES FROM STATE NURSERY

1919

	Planted on state lands	Planted on private land
White Pine	191 600	63.206
orway Pine	181,500	84,421
cotch Pino	7 (88)	10,555
Ouglas Fir		8,600
forway Spruce		25,924
led Oak		250
lise Daneous		2,650
	311,000	198,196
19	20	
	1	68.243
White Pine	75,675	
Vilte Pine	75,675 37,500	96,043
orway Pine		26.043 43.778
forway Pine Forway Spruce Cotch Pine	37,500	26,643 43,778 13,978
Korway Pine Korway Spruce Koteh Pine Coropean Larch	37,560	26,043 43,778 13,978 5,578
iornay Pine iornay Spruce cotch Pine laropean Larch lolorado Biue Spruce	37,160	26,043 43,778 13,978 5,578 26,978
forway Pine forway Spruce forth Pine foropean Larch folorado Blue Spruce White Spruce	37,500 8-0	26,043 43,778 13,978 5,578 26,978 25,393
Norway Pine Norway Spruce Potch Pine Caropean Larch Colorado Blue Spruce White Spruce	37,500 8-0	26,043 43,778 13,978 5,578 26,978
White Pine Norway Pine Norway Spruce Norway Spruce Stotch Pine Earopean Larch Colorado Blue Spruce White Spruce Wiscellaneous	37,500 8-0	26,643 43,778 13,978 5,978 26,978 25,393

1919 DISTRIBUTION BY COUNTIES

M	visconsin	o Consi	ERVATIO	N COMI	MISSION		
White Bass Fingerling			1,000	2,000	1,000	1,000 5,500 8,000	1,000
Black Bass Fingeriing	6,000 1,000 500		4,000	1,000		8,990 9,990 9,990	
Black Bass Fry	10,000			30,000	4,000	13,000	22.000 10,000
Wall Eyed Pike Fry	834,000 4,185,000 3,610,000	620,000 450,000 2,559,000 380,000	2,700,000 11,886,000 2,500,000 800,000	3,224,000 1,350,000 1,55,000 1,860,000 1,230,000	972,000	3,264,000 3,900,000 1,000,000 1,220,000	400.000 1.826.900 1.632.000
Brown Trout Fingeriing	2,000						
Rainbow Trout Fingerling	3,600						
Brook Trout Fingerling	1,200			2,000		4,000	2,000
Brown Trout Fry	28,000	12,000	12,000	52,000 62,000 58,000	16,000		
Rainbow Trout Fry	54.000 286,400 10,500	9,000	19,500 10,800 73,800	106, 200 27, 000 40, 500 61, 000 18, 000	52, 200 100, 800 14, 400 9, 000	52,200	15,000 64,500 8,000
Brook Trout Fry	28,000 88,000 8,000 340,000 16,000	32,000 8,000 60,000 62,000	198,000	144,000 30,000 56,000 12,000	24,000 8,000 36,000	16,000 56,000 12,000 24,000	34, 000 82, 000 130, 000 76, 000
the state of the s	Adams Ashland Barron Bayfeld Brown.	Buffalo. Burnett Calumet Chippewa.	Columbia. Crawford Dane. Dodge. Door	Douglas. Dunn. Egu Claire. Florence. Fond du Lac.	Forest. Grant Green Green Lake. Iowa.	Iron Jackson Jonean Junean Kenceha	Kewannee La Crosse Lafaperte Langlade Lincoln

1,000	900.	1,000 2,000	1,000	2,000 1,000 1,000	9, 500	7.9.7.4.8 0.000 0.	115,260
000	4,000		6.000	1,000	2,500	14,000	167.000
10,000	44,003			16,000	63,000		255,000
1, 020, 000 2,650, 000 1, 700, 000	714,000 18,184,000 800,000	2, 480, 000 1, 808, 000 1, 470, 000	2,000,000 1,000,000 1,602,000	3,514,000 1,428,000 1,100,000 1,200,000	18, \$24, 000 3, 340, 000 7, 191, 000	2,290,000 13,000,000 1,320,000 1,380,000 2,520,000 714,000	139,840,000
4.000		2,000				1,500	9.500
4 000 000	<u>-::</u>						13,200
2.000	2,000		2,800		3,200		21,200
	12,000	20,000 122,000 66,000 20,000	24, 000 34, 000	16,000	32,000	30,000	842,000
28, 500 28, 500 28, 800 28, 800	46.800 15.000 15.000 15.000	51,000 12,600 18,000 18,000	57,600 4,500 71,700	41.400 51.000 60.000 24,900	100.800 64.800 40.500 46.800	9,000 78,500 276,900 21,000	2,569,100
152.000 140.000 28.000	92,000 36,000 90,000	24,000 60,000	26,000 82,000	22,000 38,000 136,000 26,000	136,000 44,000 50,000 52,000 62,000	36,000 62,000 94,000 12,000	3, 135, 000
Manitowoc Merathon Marinetto Marquetto Milwalkee	Monroe Oconto Oneda Outagamie Osankee	Pepin Plerce Polk Portage Price	Racine Richland Bock Rusk St. Croix	Sauk Sawyor Shawano Shebogan Taylor	Trempealeau. Vernon. Valss. Walworth. Washburn	Washington. Waukesha Waukesha Washara. Winnebago	Total

DISTRIBUTION BY SPECIES

1919

Brook trout fry	3,135,000
Rainbow trout fry	2,569,100
Brown trout fry	842,000
Brown trout fingerling	21,200
Rainbow trout fingerling	9,500
Brown trout fingerling	13,200
Wall-eyed pike fry	139,840,000
Black bass fry	255,000
Black bass fingerling	167,000
White bass fingerling	115,260
Lake trout fry	15,912,000
Pickerel fry	2,380,000
Muskellunge fry	400,000
Roach fingerling	5,000
Whitefish fry	7,500,000
Perch fingerling	3,000
Miscellaneous	2,553

173,169,813

DISTRIBUTION BY HATCHERIES

Wedleon Watcher		
Madison Hatchery Brook trout, advanced fry	1 409 000	
RainbOw frout, advanced fry	1,402,000 867,600	
Furnished for state aquarium	1.40	
Bayfield Hatchery		2,269,740
Brook trout, advanced fry	1,698,000	
Rainbow trout, advanced fry Brook trout fingerling	659,000	
Namouw frout nagering	21,200 13,200	
Brown trout, advanced fry	302,000	
Lake trout fry	3,660,000	6 452 400
Oshkosh Hatchery		6,453,400
Wall-eyed pike fry		15,300,000
Wall-eyed pike fry	33,660,000	
DIACK DANG ITV	255,000	
Pickerel fry Muskellunge fry	220,000	
Bullheads	400,000 46	
		34,535,046
Delafield Hatchery Wall-eyed pike fry	32,400,000	
Diack bass ingerling	160,000	
DIACK DASS VEATITE	586	
Black bass acult Roach fingerling	$\begin{array}{c} 34 \\ 5.000 \end{array}$	
10 State tair acharinm	1,489	
Wild Rose Hatchery Brook trout, advanced fry	20 000	
Rainbow trout, advanced fry	30,000 1,042,500	
Brown trout, advanced fry	270,000	
To state fair aquarium	29	1 040 500
Spooner Hatchery		1,342,529
Wall-eyed pike fry		27,000,000
Wall-eyed pike fry Eagle River Hatchery Wall-eyed pike fry		27,000,000
Wall-eyed pike fry Engle River Hatchery Wall-eyed pike fry Tenney Park Hatchery		
Wall-eyed pike fry Eagle River Hatchery Wall-eyed pike fry Tenney Park Hatchery Wall-eyed pike fry	17,080,000	27,000,000
Wall-eyed pike fry Eagle River Hatchery Wall-eyed pike fry Tenney Park Hatchery Wall-eyed plke fry Pickerel fry	17,080,000 2,160,000	27,000,000 14,400,000
Wall-eyed pike fry Eagle River Hatchery Wall-eyed pike fry Tenney Park Hatchery Wall-eyed pike fry Pickerel fry Sheboygan Hatchery	2,160,000	27,000,000
Wall-eyed pike fry Eagle River Hatchery Wall-eyed pike fry Tenney Park Hatchery Wall-eyed plke fry Pickerel fry Sheboygan Hatchery Lake trout fry	7,242,000	27,000,000 14,400,000
Wall-eyed pike fry Eagle River Hatchery Wall-eyed pike fry Tenney Park Hatchery Wall-eyed plke fry Pickerel fry Sheboygan Hatchery Lake trout fry Whitefish fry	2,160,000	27,000,000 14,400,000
Wall-eyed pike fry Eagle River Hatchery Wall-eyed pike fry Tenney Park Hatchery Wall-eyed plke fry Pickerel fry Shelboygan Hatchery Lake trout fry Whitefish fry Sturgeon Bay Hatchery	7,242,000	27,000,000 14,400,000 19,240,000 14,742,000
Wall-eyed pike fry Eagle River Hatchery Wall-eyed pike fry Tenney Park Hatchery Wall-eyed plke fry Pickerel fry Sheboygan Hatchery Lake trout fry Whitefish fry Stargeon Bay Hatchery Lake trout fry Stargeon Bay Hatchery St. Croix Falls Hatchery	7,242,000 7,500,000	27,000,000 14,400,000 19,240,000
Wall-eyed pike fry Eagle River Hatchery Wall-eyed pike fry Tenney Park Hatchery Wall-eyed plke fry Pickerel fry Sheloygan Hatchery Lake trout fry Whitefish fry Sturgeon Bay Hatchery Lake trout fry St. Croix Falis Hatchery Brook trout fry	7,242,000 7,500,000	27,000,000 14,400,000 19,240,000 14,742,000
Wall-eyed pike fry Eagle River Hatchery Wall-eyed pike fry Tenney Park Hatchery Wall-eyed plke fry Pickerel fry Sheboygan Hatchery Lake trout fry Whitefish fry Stargeon Bay Hatchery Lake trout fry Stargeon Bay Hatchery St. Croix Falls Hatchery	7,242,000 7,500,000	27,000,000 14,400,000 19,240,000 14,742,000
Wall-eyed pike fry Eagle River Hatchery Wall-eyed pike fry Tenney Park Hatchery Wall-eyed plke fry Pickerel fry Sheloygan Hatchery Lake trout fry Whitefish fry Sturgeon Bay Hatchery Lake trout fry St. Croix Falls Hatchery Brown trout fry Brown trout fry Brown trout fingerling	7,242,000 7,500,000 5,000 170,000	27,000,000 14,400,000 19,240,000 14,742,000
Wall-eyed pike fry Eagle River Hatchery Wall-eyed pike fry Tenney Park Hatchery Wall-eyed pike fry Pickerel fry Sheboygan Hatchery Lake trout fry Whitefish fry Sturgeon Bay Hatchery Lake trout fry St. Croix Falls Hatchery Brook trout fry Brown trout fry Brown trout fingerling Neenah Station	2,160,000 7,242,000 7,500,000 170,000 9,500	27,000,000 14,400,000 19,240,000 14,742,000 5,010,000
Wall-eyed pike fry Eagle River Hatchery Wall-eyed pike fry Tenney Park Hatchery Wall-eyed plke fry Pickerel fry Sheloygan Hatchery Lake trout fry Whitefish fry Sturgeon Bay Hatchery Lake trout fry St. Croix Falls Hatchery Brown trout fry Brown trout fry Brown trout fingerling	7,242,000 7,500,000 5,000 170,000	27,000,000 14,400,000 19,240,000 14,742,000 5,010,000
Wall-eyed pike fry Eagle River Hatchery Wall-eyed pike fry Tenney Park Hatchery Wall-eyed plke fry Pickerel fry Sheboygan Hatchery Lake trout fry Whitefish fry Sturgeon Bay Hatchery Lake trout fry St. Croix Falls Hatchery Brook trout fry Brown trout fry Brown trout fingerling Weenah Station White bass fingerling Perch fingerling	2,160,000 7,242,000 7,500,000 5,000 170,000 9,500 115,260	27,000,000 14,400,000 19,240,000 14,742,000 5,010,000
Wall-eyed pike fry Eagle River Hatchery Wall-eyed pike fry Teaney Park Hatchery Wall-eyed pike fry Pickerel fry Sheboygan Hatchery Lake trout fry Whitefish fry Sturgeon Bay Hatchery Lake trout fry St. Croix Falls Hatchery Brook trout fry Brown trout fry Brown trout fingerling Neenah Station White bass fingerling Perch fingerling Mianisaippi River Black bass fingerling	2,160,000 7,242,000 7,500,000 5,000 170,000 9,500 115,260	27,000,000 14,400,000 19,240,000 14,742,000 5,010,000 184,500
Wall-eyed pike fry Eagle River Hatchery Wall-eyed pike fry Tenney Park Hatchery Wall-eyed plke fry Pickerel fry Sheboygan Hatchery Lake trout fry Whitefish fry Sturgeon Bay Hatchery Lake trout fry St. Croix Falls Hatchery Brook trout fry Brown trout fry Brown trout fingerling Weenah Station White bass fingerling Perch fingerling Minninsippi River Black bass fingerling State Fair Exhibit	2,160,000 7,242,000 7,500,000 170,000 9,500 115,260 3,000	27,000,000 14,400,000 19,240,000 14,742,000 5,010,000
Wall-eyed pike fry Pagle River Hatchery Wall-eyed pike fry Teaney Park Hatchery Wall-eyed pike fry Pickerel fry Sheboygan Hatchery Lake trout fry Whitefish fry Sturgeon Bay Hatchery Lake trout fry St. Croix Falls Hatchery Brook trout fry Brown trout fry Brown trout fry Brown trout fingerling Neenah Station White bass fingerling Perch fingerling Minnianippi River Black bass fingerling State Fair Exhibit Lake trout fry Oostburg	2,160,000 7,242,000 7,500,000 5,000 170,000 9,500 115,260 3,000	27,000,000 14,400,000 19,240,000 14,742,000 5,010,000 184,500
Wall-eyed pike fry Eagle River Hatchery Wall-eyed pike fry Tenney Park Hatchery Wall-eyed pike fry Fickerel fry Sheboygan Hatchery Lake trout fry Whitefish fry Stargeon Bay Hatchery Lake trout fry St. Croix Falls Hatchery Brook trout fry Brown trout fry Brown trout fingerling White bass fingerling Perch fingerling Minnissippi River Black bass fingerling State Fair Exhibit Lake trout from Oostburg Whitefish from Whitefish Bay, Door County Pickerel from Sturgeon Bay	2,160,000 7,242,000 7,500,000 170,000 9,500 115,260 3,000	27,000,000 14,400,000 19,240,000 14,742,000 5,010,000 184,500
Wall-eyed pike fry Eagle River Hatchery Wall-eyed pike fry Tenney Park Hatchery Wall-eyed plke fry Pickerel fry Sheboygan Hatchery Lake trout fry Whitefish fry Sturgeon Bay Hatchery Lake trout fry St. Croix Falls Hatchery Brook trout fry Brown trout fry Brown trout fingerling Weenah Station White bass fingerling Perch fingerling Minninsippi River Black bass fingerling State Fair Exhibit	2,160,000 7,242,000 7,500,000 170,000 9,500 115,260 3,000	27,000,000 14,400,000 19,240,000 14,742,000 5,010,000 184,500 118,260 7,000
Wall-eyed pike fry Eagle River Hatchery Wall-eyed pike fry Tenney Park Hatchery Wall-eyed pike fry Fickerel fry Sheboygan Hatchery Lake trout fry Whitefish fry Stargeon Bay Hatchery Lake trout fry St. Croix Falls Hatchery Brook trout fry Brown trout fry Brown trout fingerling White bass fingerling Perch fingerling Minnissippi River Black bass fingerling State Fair Exhibit Lake trout from Oostburg Whitefish from Whitefish Bay, Door County Pickerel from Sturgeon Bay	2,160,000 7,242,000 7,500,000 170,000 9,500 115,260 3,000	27,000,000 14,400,000 19,240,000 14,742,000 5,010,000 184,500
Wall-eyed pike fry Pagle River Hatchery Wall-eyed pike fry Tenney Park Hatchery Wall-eyed pike fry Pickerel fry Sheboygan Hatchery Lake trout fry Whitefish fry Sturgeon Bay Hatchery Lake trout fry St. Croix Falls Hatchery Brook trout fry Brown trout fry Brown trout fingerling Neenah Station White bass fingerling Perch fingerling Minninaippi River Black bass fingerling State Fair Exhibit Lake trout from Oostburg Whitefish from Whitefish Bay, Door County Pickerel from Sturgeon Bay Pike, catfish, carp, dogfish	2,160,000 7,242,000 7,500,000 170,000 9,500 115,260 3,000 12 9 8 200	27,000,000 14,400,000 19,240,000 14,742,000 5,010,000 184,500 118,260 7,000
Wall-eyed pike fry Eagle River Hatchery Wall-eyed pike fry Tenney Park Hatchery Wall-eyed plke fry Pickerel fry Sheboygan Hatchery Lake trout fry Whitefish fry Stargeon Bay Hatchery Lake trout fry St. Croix Falls Hatchery Brook trout fry Brown trout fry Brown trout fry Brown trout fingerling White bass fingerling Perch fingerling Minninsippi River Black bass fingerling State Fair Exhibit Lake trout from Oostburg Whitefish from Whitefish Bay, Door County Pickerel from Sturgeon Bay Pike, catfish, carp, dogfish	2,160,000 7,242,000 7,500,000 170,000 9,500 115,260 3,000 12 9 8 200	27,000,000 14,400,000 19,240,000 14,742,000 5,010,000 184,500 118,260 7,000

DISTRIBUTION BY COUNTIES

1920

County	Brook Trout Fry	Brook Trout Finger- ling	Brown Trout Fry	Brown Trout Finger- ling	Rainbow Trout Fry	Wall- eyed Pike Fry	Black Bass Fry	Blace Base Finanting
Adams	41,400 82,800 479,400	26,000			77,000 67,200 69,200	3.744,000 3,222,000		
Buffalo	59,400			15,000		1, 196, 000	 	
Columbia	65,400 66,300		7,200 18,000		115,200 24,000	1,900,000 8,840,000 1,884,000		42,66 8,56 24,66
Douglas	5,400 21,600	21,600 86,500 66,000	136,800 30,600		21,600 78,400 85,600 8,000	3, 024,000 2, 040,000 552,000 1, 932,000		\
Forest	54,000 15,000 16,000 24,400				87,600 67,200 17,600	138,000 200,000 1,472,000	(12,00
Iron Jackson Jefferson Juneau Kenosha	59,400 12,000	63,000	36,000	39,000	103,600 14,400 88,000	5,246,000 240,000 1,450,000 1,140,000 2,010,000	26,000	6.00
Kawaunee La Crosse Lafayette Langlade Lincoln	18,000	29.000			12,800 72,800	400,000 3,696,000 2,064,600	12,000 12,000	10.40
Manitowoc	25,200 111,600	15,000	X-25-X-3-X-3		36,400 49,000 294,000 22,400	688,000 2,150,000 1,500,000 760,000	22,000	12,00
Monroe, Oconto Oneida Outagamie, Ozaukee	61,200 18,000 39,600	14.000 37,500	18,000 7,200		94,400 46,600 105,600	782,000 17,609,000		2.66
Pepin	41,400 28,800		5,400 75,600		16,000 50,000 33,600 11,200			2.00

BIENNIAL REPORT

DISTRIBUTION BY COUNTIES.—Continued.

1920

County	Brook Trout Fry	Brook Trout Finger- ling	Brown Trout Fry	Brown Trout Finger- ling	Rainbow Trout Fry	Wall- eyed Pike Fry	Black Bass Fry	Black Bass Finger- ling
riae	46.800		54,000	9.000	32.000 9.600 33,600 111.000	960.000 1.032.000		20.000
ik. Fire	54.000 81.000		18.000 21.600			1.600,000 3.576.000 2.884,000 2.300,000 1.932,000	6,000	
rmpealeau rnon	9.000	21,000 9,000	46,800 18,000	24.000 9.000	126,400 86,400 151,200	16.577.000 1.868.000 7.282.000	152,000	68,000
shington. ukesha upaca uhara. npehago	51,000 39,600 69,600	18.000 30.000			44,800 75,600 470,400	2.576,000 7.718,000 2.184,000 1.452,000 9.638,000	6.000	
Total		653.000	801.000	162,000	78.400 3,600.800	258,000 152,000,000		905.000

DISTRIBUTION BY SPECIES

1920

Brook trout fry	2,158,200
Dood tout ify	~,158,200
Brook trout fingerling	653,000
Brown trout fry	801.000
Brown trout fingerling	162,000
Rainbow trout fry	3.600.800
Wall-eyed pike fry	152,000,000
Wall-eyed pike eyed eggs	9.000.000
Black bass fry	368.000
Black bass fingerling	905.000
Lake trout fry	20,038,500
White fish fry	7.875.500
Pickerel fry	56.000
Muskellunge fry	320.000
Silver trout fry	397.500
Salmon trout fry	61.200
Miscellaneous	3,000

DISTRIBUTION BY HATCHERIES

Madison Hatchery		
Brook trout fry	228,000	
Rainbow trout fry	1,622,400	
-		1,850,400
Bayfield Hatchery		
Brook trout fry	1,503,200	
Brown trout fry	563,400	
Rainbow trout fry	418,400	
Lake trout fry	5,596,500	
Silver trout	397,500	
Salmon trout	61,200	
-		8,040,200
Oshkosh Hatchery	20 050 000	
Wall-eyed pike fry	38,250,000 9,000,000	
Wall-eyed pike eyed eggs	9,000,000	47,250,000
Who are That share		47,250,000
Wall-eyed pike fry	36,000,000	
Bass fry	368.000	
Pickerel fry	56,000	
Muskellunge fry	320,000	
Muskeninge my	020,000	36.744.000
Delafield Hatchery		00,111,00
Wall-eyed pike fry	21,500,000	
Bass fingerling	905.000	
		22,405,000
Wild Rose Hatchery		
Rainbow trout fry		1,560,000
Spooner Hatchery		
Wall-eyed pike fry		24,750,000
the cycle price try		- •
Engle River Hatchery		
Wall-eyed pike fry		15,300,000
Tenney Park Hatchery		
Wall-eyed pike fry		16,200,000
•		
Sturgeon Bny Hatchery		# 000 000
Lake trout fry		7,200,000
Shehoygan Hatchery	F 949 000	
Lake trout fry	7,242,000	
Whitefish fry	7,873,500	15 117 500
St. Croix Falls Hatchery		15,117,500
Brook trout fry	927,000	
Brook trout fingerling	653,000	
Brown trout fry	237.600	
Brown trout fingerling	162,000	
-		1,979,600
Miscellaneous		3,000
	•	198, 399, 706

Forestry

BIENNIAL REPORT

1921-12

• OF THE

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STATE CONSERVATION COMMISSION

OF WISCONSIN

FOR THE

Fiscal years ending June 30, 1921, and June 30, 1922



Madison, Wisconsin 1922

BIENNIAL REPORT

OF THE

STATE CONSERVATION COMMISSION

OF WISCONSIN

FOR THE

Fiscal years ending June 30, 1921, and June 30, 1922



Madison, Wisconsin 1922

COMMISSIONERS

W. E. BARBER, ChairmanTer	m expires	February,	1925
C. L. HARRINGTONTer	m expires	February,	1923
B. O. WebsterTer	rm expires	February,	1927
R. S. Scheibel, Secretary.			

Wisconsin Conservi Come. 9t 3-28-1924

LETTER OF TRANSMITTAL

HONORABLE JOHN J. BLAINE,

Governor of Wisconsin.

Sim: In conformity with law, we have the honor to transmit the report of this department for the biennium ending June 30, 1922.

Respectfully submitted,

W. E. BARBER,

C. L. HARRINGTON,

B. O. Webster,

Commissioners.

R. S. SCHEIBEL, Secretary.





ST. CROIN FALLS STATE FISH HATCHERY BEFORE AND AFTER REMODELING:

FOREWORD

The State Conservation Commission herewith presents its fourth biennial report. Eight years of conservation work under its present form of organization rounded out in the close of this biennium by the commission. It is a pleasure, as well as duty, on the part of the members of the commission to acknowledge the cordial support that has been accorded them by the public during the eight years. At every point where the commission has sought to promote the cause of conservation the sportsmen's clubs of the state and the public generally have rallied to its support. This made the commission's task easier and pleasanter and beyond this such willing support gives larger promise of more effective work in the future.

The advent of the automobile has brought us face to face with the problem of immediate and effective conservation of all our forms of wild life and of our food fishes, just as the growing scarcity of lumber and the acute fuel situation have forced us to consider the need of protecting what are left of our great forests.

There is still much to be done in Wisconsin in the field of conservation but the commission is confident that with the continued support of the public it will be able to meet the demands upon it.

WARDEN DIVISION

By W. E. BARBER

Game conditions generally have improved in Wisconsin since our last report, July 1st, 1920. This applies to all varieties of game excepting perhaps deer.

DEER

Deer are destined sooner or later to cease to be a game animal in Wisconsin. Their habitat is becoming less and less extensive. Civilization is crowding them farther and farther back in narrower quarters and hunters are increasing in numbers each year, all of which casts a

gloomy horoscope for the future of those once abundant game animals in Wisconsin. Deer differ from all other varieties of game in this respect, that they require large areas of wild forest lands to hold their numbers as against the hunting fraternity. We had confidently hoped that the one buck law would safeguard them against serious inroads but the increase of hunters and easy accessibility to their range, together with the encroaching tide of civilization, has brought about a condition that demands a most careful investigation.

In 1921 the Conservation Commission sent to the county clerks printed postcards to be given to each purchaser of a deer tag, requesting that they fill out the card, reporting the weight, number of prongs and county in which they killed their buck. That year the hunters' reports showed 4005 bucks killed. This year, 1922, we continued the same system and the number of bucks reported was 2869. This indicates without question of doubt that the bucks are decreasing and should be protected by a closed season for two years at least.

PRAIRIE CHICKEN AND PARTRIDGE

The closed season provided by the legislature for prairie chicken and partridge extending from 1916 to 1921 has brought marvelous results in the increase of these birds. Never have the results of protection of any species of wild animal been more clearly demonstrated than in this instance. At the close of the hunting season in 1915 it seemed that these birds were doomed to extermination but the closed season and the co-operative efforts of the warden force and sportsmen in suppressing law violation brought the birds back again more plentiful than our most optimistic hopes could anticipate. The increase is more pronounced in the north half of the state, as should be expected owing to the intensive farm activities in the south section. We can hardly hope that partridge will re-establish their old-time abundance in the southern section owing to the changed environments.

HUNGARIAN PARTRIDGE

Owing to the prevailing condition the Conservation Commission recommends that steps be taken with the aim in view of stocking the south half of the state with Hungarian partridge. These birds were introduced into Wisconsin about six years ago by Gustave Pabst of M Iwaukee. He liberated about 1200 pairs in Waukesha County and they have proven a most splendid substitute for our native partridge. A closed season was provided for a period of two years, when the season was opened for two days in September with a daily bag limit of five birds. At the close of the two years the legislature lengthened the season to five days with a daily bag limit of five birds. After one year of the five-day season and five-bird bag limit a petition was presented to the Conservation Commission asking that the open season be reduced to two days with a daily bag limit of three birds. After hearing the petitioners an order was issued by the Conservation Commission reduc-

ing the open season and bag limit as prayed in the petition. This order will remain in force until changed by the legislature.

The Hungarian partridges are very hardy birds and have demonstrated their ability to withstand the Wisconsin elimate. They are very prolific and are not mischievous or harmful to agricultural crops. They are an open-field bird and are the most desirable foreign bird that can be secured for stocking purposes. An appropriation should be made for sufficient funds to purchase at least 10,000 pairs of these birds to be liberated in the counties in Wisconsin where our native partridges are scarce. Unfortunately the Hungarian partridge cannot be raised successfully in captivity. Mr. Pabst has labored hard and diligently to propagate the birds and has invested considerable money in a game farm, buildings, etc., for that purpose, but after trying for two or three years he abandoned the project and is convinced that the better way is to buy the parent birds and liberate them as they will take care of themselves and multiply rapidly.

THE WARDEN DIVISION

Any person familiar with game and fish conditions is aware that a warden is needed in each county of the state in order to give the protection required for properly conserving the game and fish in all sections of the state. We have had an inadequate force for some yearsonly fifty-three wardens to cover the seventy-one counties of the state. Kewaunee, Calumet, Washington, Ozaukee, Kenosha, Rock, Green, Crawford, Richland, Columbia, Dodge, Green Lake, Marquette, Adams, Juneau, Outagamie, Eau Claire, Chippewa, Price, Burnett and Florence counties have no wardens. Citizens of those counties feel that they are entitled to a warden, just the same as the other counties. They pay for their hunting licenses and contribute their share in maintaining the warden force. No fair-minded person can take issue on this point, but in order to supply the additional wardens more money must be appropriated. can only be done by the legislature and the Conservation Commission have asked an additional appropriation this year that will supply sufficient funds so that a warden may be placed in every county of the state. To raise this money we recommend that a general hunting and fishing license of \$1.00 be provided or an additional 50c added to the hunting license.

There is great objection on the part of many of our citizens to charging a license for fishing. The sportsmen argue that inasmuch as much of the appropriation provided for the Conservation Commission is expended for the propagation and distribution of fish that the fishermen should help bear the burden. There would probably be less opposition to the raising of the necessary funds by adding 50c to the hunting license, which would increase the income of the commission about \$85,000.

Wisconsin is the natural habitat of various varieties of game and fur-bearing animals and there is no logical reason why we should not have an abundant supply of all varieties. All that is necessary is proper regulations of open seasons, bag limits and a sufficient warden

force to protect them. It seems folly inasmuch as the sportsmen are willing and anxious to pay the additional license fee, providing the warden force is enlarged so that the game will be properly protected, that such a bill cannot be passed.

We trust that the legislature will see the advantage to the people of Wisconsin in providing sufficient funds for stocking the south half of the state with Hungarian partridge and providing an adequate warden force.

FISHERIES DIVISION

By B. O. WEBSTER, Commissioner

While there was a time in this state when it was necessary for the fisheries officials to send out requests broadcast over the state, asking the people who were interested in planting fish to send in their applications in order to get rid of the fish that were raised, just the reverse conditions now exist. We have applications for all kinds of fish piling in to us until it would seem as though every third person who lives in the state was interested in planting fish in our streams and inland lakes. This is as it should be, for the state of Wisconsin is especially blessed with thousands of beautiful lakes and streams that are fished hard from season to season, and the only way it will be possible to keep them well stocked with fish under the circumstances, will be by regular and persistent planting of young fish from year to year. All our lakes and streams should never have one year go by without having fish planted in them. Every person who takes fish out of them should make an effort to plant some back. It certainly does our hearts good to see the enthusiasm manifested in most places when our fish car rolls into a station loaded to its capacity—which is around 200 cans now—with some certain kinds of fish that we have to distribute. On such occasions the space around the depot is filled with automobiles and trucks, waiting to take the young fish to some appropriate place where they may grow into a full sized fish of their kind.

This carload lot method of delivering fish of fingerling size or larger to the farthest corners of the state used to be a very difficut matter before we had our car equipped with an adequate aerating system. With the system now installed on the car it is a simple matter for us to deliver to any part of the state from our farthest hatchery through the warmest weather. During our distribution of brook trout from St. Croix Falls hatchery in the season of 1920, when the weather was intensely hot, our reports with hardly any exception, were to the effect that the fish came through with no loss at all. It is with a good deal of satisfaction that we are able to announce it is our intention never to distribute any kind of trout until all possibility of floods have disappeared nor until the fish

have reached a length of at least one inch or more, which means that they will be fed in our hatcheries until they are perfectly able to take care of themselves if planted in a properly protected place, such as a well covered weed bed in a spring, or spring run leading into some good trout stream. This method entails considerable expense over the old method of getting them out soon after they were hatched, but it will pay in the long run. An experiment at the Bayfield hatchery proves that if we can plant five million trout in our waters each year—assuming that they are well planted and have as good feeding grounds as the fish we experimented with at the hatchery—we can expect a crop of one million catchable trout in our streams each year as a result.

Creditable progress has been made along several lines at most of our hatcheries throughout the state. The stock of breeding fish at all our hatcheries has been increased in a marked way. Improvements at many of the places have practically transformed the whole place. This applies especially to the Madison hatchery, where many much needed improvements have been made in the last two years. All the hatchery buildings have been painted and put in first class repair. The ponds and races used for raising the fish on the grounds have all been repaired and put in A-1 condition. The grounds in general have been improved and the general beauty of the place has been enhanced to a great degree. We now have the finest lot of brood fish at this station that has been held there for many years, which will materially increase our output of young fish from this hatchery in the near future.

The St. Croix hatchery, a cut of which is shown on the first page, has made wonderful strides in advancement. The upper cut on this page shows the original building as it was purchased by the state for fish hatchery purposes a few years ago, while the lower cut shows the transformation that has taken place in the outside construction of this building since it has been converted into a state fish hatchery. This hatchery is in a class by itself, being the only four story hatchery in existence. The usual construction of a fish hatchery is on the ground floor. On account of the elevation of our water supply we have found it possible to use all four floors of this building for hatchery purposes. It has already outgrown its capacity to the extent that we were obliged to build an outside battery of rearing troughs last year in order to take care of the fish we handled there. Only trout are hatched and planted from this station, and about 6000 cans were shipped out during the last shipping season.

The Bayfield hatchery has also been wonderfully benefited by bringing in four artesian wells. The water supply for this station is taken or was taken from two creeks that are badly flooded during the spring rains and melting of the snow. It became necessary to obtain a new water supply or abandon the place. Having good reason to believe we could get artesian water on the grounds we commenced drilling for it and now have four wells that produce about one-fourth of the amount of water we need to run the plant independent of the creek water. It is our intention to continue drilling as money is provided until sufficient water is obtained for all our work there. The water from these wells is

perfectly adapted for fish culture. New cement bulkheads in ponds, new cement overflow of raceways, and repair to the foundation of the building, which was in very bad shape, have also been made. A much needed survey of the land owned by the state along Pike's creek has been completed and blue prints of the same are now available. The land adjacent to the state along this creek is rapidly becoming converted into farms and to protect this area from being denuded of the trees that cover it survey lines had to be run.

Many very necessary improvements have been made at our bass hatcheries, both Woodruff and Delafield, which will tend to increase the output of this highly prized fish. Our program for future improvements will find a long felt need.

The same encouraging report is to be made in connection with our Wild Rose trout hatchery. The last two seasons have seen a marked improvement in our brood fish, with no discouraging losses from any of the numerous diseases that brook trout are heir to.

Every effort is being put forth by this commission to increase the propagation of our most important hook and line fish, the muskellunge, at our Woodruff hatchery in the northern part of the state. This fish, in our estimation, should receive more than ordinary attention on the part of the commission to increase the output of eggs, and if possible prevent the entire extinction of this species in our northern lakes, which is sure to come unless our efforts can greatly increase the output that it has been possible to obtain in the past.

STATE PARKS

By C. L. HARRINGTON,

Commissioner

The summer seasons of 1921 and 1922 witnessed an increasing patronage to the state parks. This was true of each of these public areas, but the increase was particularly noticeable on the parks which can be reached over good roads and which are located along the routes of tourist travel into the state. For instance, during the past season at Devils Lake, which has continued to be the most popular of the state parks, as many as 180 tents have been pitched at one time at the north end. This season was characterized particularly by the great increase in the number of tourists carrying their own tents and camping paraphernalia. It has come to be a recognized fact that good roads are essential to a state park rendering full service to the people. The contemplated plan of making each state park accessible over a trunk line highway, making these public areas, in fact, adjuncts to the trunk line system, will very materially add to their value to our citizens and to those who come this way every summer.

. Addition to Park System

Negotiations were completed by which the historical shot tower area of sixty acres on the Wisconsin river across from the village of Spring Green was added to the state park system. This area was presented to

the state by Mrs. Jenkin Lloyd Jones, and several cottages on the ground were also donated to the state by their owners under a life lease provision, so that eventually the entire property will be owned by the state. Suitable acceptance exercises were held on October 1, 1922, on the area. A large assemblage of people from all parts of Wisconsin, including the Governor, participated in these exercises. This park will be known as the Jenkin Lloyd Jones State Park at Tower Hill.

PERMANENT IMPROVEMENT BEING MADE

The past two years has witnessed the continued improvement of the state parks. The greatest effort of the commission has been to improve and maintain the roads in these parks. The completion of the Warner Memorial Road has provided Devils Lake with an excellent entrance way. The other roads in this area have been partially surfaced, as have portions of the main roads in the Peninsula, Nelson Dewey and Interstate Parks. A great deal of work must be done, however, before the roads in these areas are what they should be. At least twenty-five miles of old roads must be widened and surfaced before even comfortable driving conditions are established. dition to the road improvement several new wells were drilled and the water facilities improved, additions to the sanitary conveniences made, the state-owned buildings on the parks have been repaired and kept in good condition, new tables and benches made, fireplaces and tenting spaces provided, new trails and pathways opened up, a new building with one room living accommodations and a workshop built on the Pattison park, railings to protect pedestrains constructed, fire lines cut, and a large number of other miscellaneous jobs done which tend to improve the parks and make them more serviceable to all.

Improvements and maintenance along the lines above indicated must be continued during the next two years. Particular emphasis will again be laid on road betterments. Plans are now under way for much needed additions to the water and toilet facilities at Devils Lake. Additional work must be done on all the parks to keep them in shape, so that they can at least partially take care of the recreational demands of the public.

FOREST PROTECTION

The law changes of the last session, making all conservation wardens fire wardens and clothing them with authority to enforce the fire laws, has been very helpful to the commission in its activities toward the protection of lands from destructive fires. It enables the commission to have in each county in which there is a risk from fire a warden for the investigation of fires, the actual work of fire fighting, and in every instance the warden being familiar with conditions and widely known has been able to do particularly good work. Fires during the past two years have been confined almost entirely to the month of October. There is still considerable carelessness on the part of local citizens in burning during dry times and allowing fires to escape from their property limits. Continual agitation for more care with fire in the woods and cut-over lands has been conducted by the commission and

beneficial results noted. The railroads are to be commended on the care they give to their front end nettings and ash pans. The presence of the wide trunk line highways running parallel to the railroads has been of great value in reducing fire risk. It is the opinion of the commission that the fire hazard is gradually diminishing over most of the northern counties as fields and clearings are opened up, roads built, and the citizens repeatedly cautioned and advised about the setting of fires. It should be remembered, however, that great areas of northern Wisconsin are still forested or cut-over, that a large mass of inflammable material accumulates annually from land clearing and logging and that suitable protection that will prevent a conflagration, allow young timber to grow to maturity, and conserve waters, wild life and natural beauty, can only be had through eternal vigilance and care with fire at all times. There are several large areas of sand and marsh land in the state that need additional protection from fire and it is the hope of the commission that legislation toward that end will be favorably considered by the next legislature.

Special attention has been given the sandy areas in southern Douglas, Bayfield, Washburn, and Burnett counties during the past two years. In conjunction with several large landowners and the United States Forest Service, a permanent organization for protecting this large area of lean land from fire is being established. Seven lookout towers have been erected and have been connected up with telephone lines, so that a commanding view of that entire region and suitable communication can be had at all times. This work has been in charge of a state ranger, and it is hoped to eventually extend it to include all of this jack pine area of more than one million acres in the northwestern part of the state. These lands dry out quickly and fires develop easily and burn flercely and they are more in need of protection than any other lands in the state.

STATE LANDS AND FOREST RESERVES

The acreage of state lands and forest reserve remains practically the same as it was two years ago. The work of protecting these properties against fire and trespass has been continued. Also, considerable improvements have been made on these lands in the way of road repairs and extensions, tree planting, and the care and maintenance of the stateowned buildings. Approximately thirty-five miles of roads have been regraded, widened, and in many cases top dressed with heavier soil. The protection afforded the state lands from fire during the past ten years is very noticeable at the present time, in the heavy growth of small timber that is coming up on these properties. The forest tree nursery at Trout Lake has been operated continuously and shipments of trees for planting on state-owned lands as well as on privately owned lands in the state have been made each spring. The annual production of this nursery will be increased to at least one million trees per year in the near future. Figures on trees planted on state lands and shipments made for planting on other lands within the state appear in the appendix. The forest plantations on state lands are in good condition and all species planted are thriving.

FINANCIAL STATEMENT OF CONSERVATION COMMISSION

July 1, 1920, to June 30, 1921

OPERATION

Unexpended balance	\$ 1,449.67 233,495.99 122.90	\$228,624.68 6,443.88
	\$235,068.56	\$235,068.56
REPAIRS AND MAINTENA	ANCE	
Appropriation Fire loss Total disbursements. Unexpended balance	\$15,000.00 90.00	\$14,602.48 487.52
•	\$15,090.00	\$15,090.00
PROPERTY AND IMPROVE	MENTS	
Appropriation Refund Total disbursements Unexpended balance	\$10,000.00 4.90	\$9,921.10 83.80
-	\$10,004.90	\$10,004.90
Administration Forestry Farks Wardens Fisheries	\$32,169.68 24,548.64 14,955.35 125,526.02 55,948.57	\$253,148.26
ADMINISTRATION		
Salaries Traveling expenses Printing Supplies Postage Telephone and telegraph Express and freight Advertising	1,107.38 1,418.60 613.62 112.86	
		\$32,169.68
FORESTRY DIVISION	i	
Salaries and labor. Supplies Improvements Repaire. Employe's expenses Insurance. Advertising	\$8,704.80 3,246.30 1,541.14 4,357.74 5,814.20 788.15	. •
		\$24,548.64

PARK DIVISION

Supplies Repairs Improvements	2,065.51 5,308.61 1,999.07	
Expenses, employes'	347.37	
TelephoneInsurance	24.50 1,105.07	
-	1,100.07	
=		\$14,955.3
PARK DIVISION		
Peninsula	\$3,651.40	
Devil's Lake	5,830.33 2,457.02	
Nelson Dewey	2.956.60	
Pattison	60.00	
		\$14,955.3
WARDEN DIVISION		\$14,955.3
Salaries	\$78,247.30	\$14,955.3
Salaries	3.809.24	\$14,955.3
Salaries Raliroad fares Hotel expense Livery expense	3,809.24 15,759.18 969.76	\$14,955.3
Salaries	3,809.24 15,759.18 969.76 3,727.91	\$14,955.3
Salaries Raliroad fares Hotel expense Livery expense	3,809.24 15,759.18 969.76 3,727.91 332.93 1,071.84	\$14,955.3
Salaries Raliroad fares Hotel expense Livery expense Other expense Telephone Gas and oli Game farm	3,809.24 15,759.18 969.76 3,727.91 332.93 1,071.84 100.00	\$14,955.3
Salaries Raliroad fares Hotel expense Livery expense Other expense Telephone Gas and oil Game farm	3,809.24 15,759.18 969.76 3,727.91 332.93 1,071.84 100.00 3,546.26	\$14,955.3
Salaries Raliroad fares Hotel expense Livery expense Other expense Telephone Gas and oil Game farm Improvements Boat supplies Boat supplies	3,809.24 15,759.18 969.76 3,727.91 332.93 1,071.84 100.00 3,546.26 365,32 217.92	\$14,955.3
Salaries Raliroad fares Hotel expense Livery expense Other expense Telephone Gas and oil Game farm Improvements Boat supplies Boat repairs Launch hire	3,809.24 15,759.18 989.76 3,727.91 332.93 1,071.84 100.00 3,546.26 365,32 217.92 133.75	\$14,955.3
Salaries Raliroad fares Hotel expense Livery expense Other expense Telephone Gas and oil Game farm Improvements Boat supplies Boat repairs Launch hire Supples and provisions Insurance	3, 809, 24 15, 759, 18 969, 76 3, 727, 91 1,071, 84 100, 00 3, 546, 26 365, 32 217, 92 133, 75 1, 920, 77 237, 33	\$14,955.3
Salaries Railroad fares Hotel expense Livery expense Other expense Telephone Gas and oil Game farm Improvements Boat supplies Boat repairs Launch hire Supplies and provisions	3 809 24 15,759 18 969.76 3,727.91 332.93 1,071.84 100.00 3,546.26 365,32 217.92 133.75 1,920.77	\$14,955.3

FISHERIES DIVISION

Madison Hatchery	\$9.367.13
Bayfield Hatchery	9.650.43
Oshkosh Hatchery	1.001.01
Minocqua Hatchery	2.023.35
Delafield Hatchery	3.100.82
Wild Rose Hatchery	7.389.53
Sturgeon Bay Hatchery	3.332.04
Shehowan Hatchen	3.300.72
Sheboygan Hatchery	144.60
Spooner Hatchery	20.25
Eagle River Hatchery	
St. Croix Falls Hatchery	5,123.94
Tenney Park Hatchery	125.29
State Fair exhibit	199.87
Distribution of fish	8,561.42
Collecting lake trout eggs	953.41
Collecting pike eggs	1,279.90
Collecting pickerel eggs	43.70
Survey of trout streams	331.16
,	

\$55,948.57

\$125,526.02

FISHERIES DIVISION

Salaries and labor Fish food Supplies Barn supplies Telephone Insurance. Repairs.	\$23,588.39 7,101.18 7,532.34 158.30 382.54 1,597.51 2,4936.13 2,834.63	
Improvements. Express, freight and drayage. Employees' expenses.	1,443.80 6,373.74	
		\$55,948.57
ST. CROIX FALLS HATCHERY E		
Unexpended balance Appropriation Disbursements Unexpended balance	\$18,787.07 7,500.00	\$24,041.57 2,245.50
·	\$26,287.07	\$26,287.07
WARNER ROAD		
Unexpended balance	\$11,070.94	\$8,046.45 3,024.49
=	\$11,070.94	\$11,070.94
GOVERNMENT REFORESTATION Receipts and unexpended balance Disbursements	FUND \$4,215.20	\$3, <u>688,5</u> 6
Unexpended balance	\$4,215.20	\$4,215.20
=	V1,210.20	
PARK PURCHASE FUNI)	
Receipts and unexpended balance	\$1,877.23	\$500.00 1,377.23
- -	\$1,877.23	\$1,877.23
THE CONSERVATIONIS	r	
Unexpended balance	\$801.67 3,972.10	\$4,325.20 448.57
_	\$4,773.77	\$4,773.77
_		
AUTOS AND TRUCK		
Appropriation (Conservation Fund)	\$2,973.34	\$2,973.34
- -	\$2,973.34	\$2,973.34

16 . WISCONSIN CONSERVATION COMMISSION

LOTS AT ST. CROIX FALLS HA	TCHERY	
Appropriation (Conservation Fund)	\$5,275.00	\$5,275.00
	\$5,275.00	\$5,275.00
INSURANCE—REST LAKE CA	BIN	
Unexpended balance	\$44 7.10	\$44 7 . 10
·	\$447.10	\$447.10
AMERICAN REFRACTORIES C	OMPANY	
Unexpended balance Appropriation, Chap. 565, Laws 1919. Appropriation, Chap. 601, Laws of 1917 Disbursements, Chap. 565, Laws of 1919. Disbursements, Chap. 601, Laws of 1917	\$25,250.00 49,750.00 1,054.28	\$75,000.00 1,054.28
- -	\$76,054.28	\$76,054.28
FIGHTING FIRES ON STATE	LANDS	
Disbursements		\$409.10 30.45
Net disbursements		\$378.65
EXTRA WARDENS DURING DEF	R SEASON	
Appropriation (Conservation Fund)	\$1,316.25	\$1,235.25 81.00
	\$1,316.25	\$1,316.25
FIRE PREVENTION AND CONTROL	(WEEKS LA	W)
Reimbursement by U. S. Government	\$516.80	\$516.80
•	\$516.80	\$516.80

FINANCIAL STATEMENT OF CONSERVATION COMMISSION

July 1, 1921, to June 30, 1922

Appropriations Unexpended balance Refunds Total disbursements Unexpended balance	\$264,175.00 6,443.88 268.07	\$255,764.08 15,122.87 \$270,886.95
REPAIRS AND MAINTEN Appropriation Unexpended balance Total disbursements Unexpended balance	\$30,000.00 487.52 \$30,487.52	\$27,204.03 3,283.49 \$30,487.52
PROPERTY AND IMPROVED Appropriation. Unexpended balance. Total disbursements. Unexpended balance.		\$28,594.20 1,489.60 \$30,083.80
CLASSIFICATION OF DISBURS Administration Forestry Parks Wardens Fisheries	\$42,265.24 30,134.94 22,786.32	\$311,562.81
ADMINISTRATION Salaries Supplies Printing Postage Telephone and telegraph Express, freight and drayage Traveling expenses Advertising State car expenses	677.66 3,078.35 72.55	\$4 2,265. 2 4
FORESTRY AND FIRE PROTECTION Salaries and labor	\$12,789.75 3,250.09 6,180.28 5,627.67 1,717.87	

PARK DIVISION .

Salaries and labor Supplies Repairs Improvements Expenses, employees Telephone Insurance	\$5,627.37 1,624.88 9,233.84 4,940.14 365.46 124.88 869.75	\$22,786.32
•		
PARK DIVISION		
Peninsula Devlis Lake Inter State Nelson Dewey Pattison Brule Tower Hill	\$7,671.49 9,393.34 940.60 3,489.62 1,195.27 88.00 8.00	
		\$22,786.32
•		
WARDEN DIVISION		
Salaries Raliroad fares Hotel expenses Livery expense Other expense Telephone Auto supplies and repairs Provisions and supplies Gasoline and oil Boat supplies Boat repairs Insurance Improvements Launch hire Game farm Advertising Auto mileage State car expense Legal services	\$80,590.75 4,444.73 15,962.31 863.85 1,939.18 305.75 1,704.67 1,137.58 349.43 284.63 537.61 210.68 4,736.24 120.00 594.33 1040 12,299.40 7,035.38 105.12	\$133,232.04
FISHERIES DIVISION		
Madison Hatchery Bayfield Hatchery Oshkosh Hatchery Minocqua Hatchery Delafield Hatchery Wild Rose Hatchery Sturgeon Bay Hatchery Sheboygan Hatchery Spooner Hatchery Eagle River Hatchery St. Croix Falls Hatchery Tenney Park Hatchery State Fair exhibit Distribution of fish Collecting lake trout eggs Collecting pike eggs Survey of trout streams Collecting fish at Neenah dam	\$11,503.03 11,684.21 383,33 3,838.48 7,152.26 7,422.15 3,285.05 3,375.10 28,375.10 19,860.49 301,23 212.00 8,022.79 614.96 4,036.48 53.84 421.34 639.29	\$63 143 77
=		\$83,143.77

FISHERIES DIVISION

Salaries and labor Fish food Supplies Telephone Insurance Repairs Improvements Express, freight and drayage Employees' expense	\$26,748.85 6,594.66 9,811.48 571.95 1,581.53 12,342.52 17,199.95 1,954.01 6,338.82	
	•	\$83,143.77
•		
WARNER ROAD		•
Unexpended balance	\$3,024.49	\$3,024.49
· · · · · · · · · · · · · · · · · · ·	\$3,024.49	\$3,024.49
GOVERNMENT REFORESTATIO	N FUND	
Unexpended balance Receipts for year Disbursements Balance	\$526.64 1,872.04	\$184.32 2,214.36
	\$2,398.68	\$2,398.68
· · · · · · · · · · · · · · · · · · ·		
ST. CROIX FALLS HATCHERY I		
Unexpended balance Disbursements Balance	\$2,245.50	\$1,249.51 995.99
-	\$2,245.50	\$2,245.50
-		
THE CONSERVATIONIS	T	
Unexpended balance Total receipts Disbursements Balance	\$448.57 2,225.83	\$2,367.38 307.02
- -	\$2,674.40	\$2,674.40
h. n.r. nunaw. an awar	_	
PARK PURCHASE FUNI		
Unexpended balance Receipts for year Disbursements	\$1,377.23 5,294.50	\$1,095.16
Unexpended balance	•	5,576.57
=	\$6,671.73	\$6,671.73
EMERGENCY FIRE WARD	ENS	
Disbursements	• • • • • • • • • • • • • • • • • • •	\$1,074.25
=		
FIRE PREVENTION AND CONTROL (W	·	
Balance, July 1, 1921. Reimbursement by U. S. Government. Refunds	\$516.80 8,421.31 9.10	
DisbursementsBalance		\$7,338.53 1,608.68
	\$8,947.21	\$8,947.21
=	Digitizos	Google

FIGHTING FOREST FIRES

(Chapter 518, Laws of 1921.)

• • • • • • • • • • • • • • • • • • • •	\$290.15
CHERY	
\$2,000.00	\$199.97 1,800.03
\$2,000.00	\$2,000.00
\$4,000.00	\$2,951.15 1,048.85
\$4,000.00	\$4,000.00
EA	
\$71.05	\$71.05
\$71.05	\$71.05
R SEASON	
\$2,000.00	\$1,917.93 82.07
\$2,000.00	\$2,000.00
ND	•
tatutes.)	
• • • • • • • • • • • • •	\$57,967.81 112,379.76
21	
	5,930,90 2,987,50 23,157,30 146,730,40 11,275,00 319,50 1,083,20 6,382,43 1,504,09 2,000,00 1,990,65 700,00 14,443,84 904,50 2,565,95 6,947,90 3,187,54 3,972,10
	\$2,000.00 \$4,000.00 \$4,000.00 EA \$71.05 R SEASON \$2,000.00 ND tatutes.)

BIENNIAL REPORT

TOTAL RECEIPTS FROM July 1, 1921 to June 30, 1922

Nonresident fishing licenses	\$67,803.74
Great Lakes fishing licenses	5.779.30
Mississippi River fishing licenses	3.151.50
Fish dealers' licenses	2.100.00
Rough fish	19,547.36
Resident hunting licenses	160.433.55
Nonneidant hunting Houses	15.675.00
Nonresident hunting licenses	
Duplicate licenses	321.50
Bettlers' licenses	683.00
Confiscations	6,338.18
Warden's fees	1,217.62
Trapping licenses	56,078.89
Set-line licenses	1.756.58
Guide licenses	596.00
Clamming licenses	1.305.00
Park leases and concessions	5.294.50
Beaver licenses and tags	7.780.50
Deer tags	15.962.25
Island leases and nursery stock.	1.863.25
Missells seems	
Miscellaneous	3,212.56
Fire control (Weeks law)	8,430.41
Conservationist (magazine)	2,225.83
Total	\$387.557.22

FINES IMPOSED

	1920-1921		1920-1921 1921-1		21-1922	
	Number	Amount	Number	Amount		
1	9	\$155.00	. 9	\$450.0		
damsshland	3 7	350.00	16	800.0		
arron	20	1,150.00	18	925.0		
avfleld	19	960.00	16	800.0		
rown	18	1,125.00	9	450.0		
uffalo	4	150.00	• • • • <u>•</u> • • • •	050		
urnett	2	100.00	3	250.0 150.0		
alumet	12	1,500.00	12	605.		
hippewa	23	1,200.00	19	975		
larkolumbia	3	150.00	2	100.		
rawford	5	250.00	8	400 . 825 .		
ane	14	1,300.00	16	825.		
odge	4	175.00 730.00	24	1,320.		
oor	14	730.00	5	250.		
ouglas	18	960.00	20	1,025.		
unn	3	150.00	2 4	100.0 225.0		
au Claire	13	650.00	2	100.		
lorenceond du Lac	15	750.00	10	500.		
orest	4	225.00	ii	1,015.		
rant	l .		3	150.		
reen	1	50.00	1	50.0		
reen Lake	2	100.00	1 1	50.0		
owa	<u></u>	<u></u>	1 1	50.0		
on	13	705.00	16	935. 200.		
ackson	4	200.00	10	490.0		
efferson	3 8	150.00 700.00	16	300.		
ineau	16	870.00	32	1,610.		
enoshaewaunee	17	350.00	7	350		
a Crosse	3 1	255.00	4	200.0		
afayette	3 3	150.00	3	150.		
anglade	38	2,165.00	57	4,145.		
incoln	18	990.00	21	2.275.		
Ianitowoc	14	1,210.00	16	925.		
Iarathon	15	750.00	16	1,845.		
Iarinette	10	500.00	3	150.		
larquette	3 8	150.00 680.00	2	100		
filwaukeefonroe	4	310.00	2	100.		
conto	25	1,450.00	30	1,465.		
neida	27	1,915.00	27	1,460.		
utagamie		. 	4	250.		
zaukee	1	50.00	4	210.		
onin	5	250.00	[].	******		
ierce	5	700.00	12	100.0		
olk	10	700.00	11 27	600.		
ortage	12 16	1,125.00 895.00	20	1,770.0 1,210.		
rice	10		5	250.		
ichland	2	125.00	1.	50 .		
ock	2	100.00	28	1,550.0		
usk	21	1,735.00	6	270 .		
t. Croix		<u></u>	4	200.		
auk	2	100.00	7	350.		
awyer	19	1,090.00	9 46	455. 2,880.		
hawanohawano	63	4,000.00 560.00	10	2,880. 500.		
aylor	11	585.00	25	1,650.		
rempealeau	i i	50.00	l i l	50.		
ernon	3	165.00	l î l	50.		
ilas	39	2,400.00	20	1,070.		
Valworth	21	1,110.00	42	1,070. 2,200.		
7 agh hurn	5	250.00	22	1,100.0		
Vashington	12	975.00	6	400.		
aukesha	18	1,050.00	18	1,000.		
Vaupaca	24	1,235.00	39	2,460.		
Vaushara	1 1	50.00	3	150.		
Vinnebago	8	445.00 330.00	13	350. 675.		
Vood	6	330.00				
	741	\$45,755.00	853	\$50,065.		

BIENNIAL REPORT

CONFISCATIONS

Number 693	1920-1921 Sold for. 	Number 794	1921-1922 Sold for \$6,338.18	
WARDEN'S FEES				
For 1920-1921 For 1921-1922				
Total		· · · · · · · · · · · · · · ·	\$2,721.71	

ARRESTS MADE—CONVICTIONS SECURED

Violation hunting Violation fishing Violation trapping Miscellaneous	451 124	1921-1922 Arrests 392 493 245 75
Convictions	1,030 741	1,205 853

FURS TAKEN UNDER TRAPPING LICENSES

For year ending June 30, 1921:	Number	Value
Muskrat*	34,618	\$39,473.00 30.00
Fisher	, o	47.00
Badger	30 00	
Skunk	29,225	48,351.00
Mink*	835	3,221.50
Racoon	1,371	3,135.50
Weasel	4,617	2,316.00
Pox	419	2,101.00
Wolf	147	564.00
Ermine	143	49.75
Bear	7	87.00
Total value		\$99,375.75

*Muskrat and mink taken in the counties of Winnebago and Waushara, and two townships in Waupaca county. Balance of State was closed.

For year ending June 30, 1922: Number	Value
Muskrat	
Mink 52,703	
Skunk	
Racoon	
Weasel	
Fox	
Radger 6	174.75
Wolf	4,675.00
Bear	453.75
Wild cat	99.00
Fisher	3 44.50
Total value	\$914,617.55

CATCH OF BEAVER AND OTTER February and March, 1922

-	_	
County	Beaver	Otter 3
Ashland	563 960	. 9
Clark	398	. 9
Chippewa	246	ĭ
Douglas	488	5
Iron	623	10
Oneida	388	. 36
Rusk	327	. 2 11
Sawyer Taylor	359 367	
Price.	824	1 6
Washburn	86	5
	5,629	98
Webser of heavy of the		004 070 15
Values of beaver skins	• • • • • • • • • • • •	\$94,978.15 2,065.00
Average value of beaver skin		18.49
Average value of otter skin		24.13
_	=	
DEER KILLED DURING SEASON		
Ashland	No. Deer 327	Pounds 52,320
Barron	30	4.800
Bayfield	606	96,960 5,920
Burnett	37	5.920
Chippewa	54	8,640
Clark		15,200 78,880
Douglas	293 38	6,080 6,080
Florence		23,680
Forest	218	34,880
Iron	162	25,920
Langlade	150	24,000
Lincoln		25,280 19,200
Marinette		19,200
OneidaOconto	152	24.320 6.720
Polk	22	6,720 3,520
Price		50,880
Rusk		39.840
Sawyer		66,720
Taylor	144	23,040
Vilas Wood	284 25	45,440 4,000
W00d		4,000
Average weight	4,289	686,240
	-	
DEER KILLED DURING THE SEASO		
County	No. of Deer	Pounde
Ashland	187	29,956
Barron	5 343	1,093 56,321
Burnett	26	4.608
Chippewa		2,484
Douglas	280	45.324
Eau Claire	5	825
Florence	95	15, 49 8 18,8 0 8
Iron	116 136	21,441
Langlade	50	9.222
Lincoln	65	9,222 10,768
Marinette	65	10.934
Oconto	15	2,608
Oneida	133	22,47
Polk		2,057
Rusk		52,096 24,277
Sawyer	328	52 OAG
Taylor	170	52,960 26,791
Vilas	276	45,520
Washburn	57	9,529
Miscellaneous	10	1,707
•	2,869	467,309
•		

Wisconsin Conservation Commission.

Gentlemen—I herewith submit to you my report of Locomotives and Rights of Way inspected during 1921.

The following table shows the number of locomotives inspected and their classification as to condition at the time of inspection:

Total	Good	Fair	Bad	Repairs*	0. 8. **
246	207	9	18	12	0

The following is a table of the rating of locomotives inspected at the Main Line Round Houses:

	Total	Good	Fair	Bad	Repairs*	0.8.**
C. & N. W. R. R. C. St. P. M. & O. R. R. Northern Pacific R. R. Soo Line. C. M. & St. P. R. R. Wis. & Northern R. R. G. B. & Western R. R. Wisconsin & Michigan R. R.	51 42 1 44 23 1 10 3	44 40 1 44 23 1 10	0 2 0 0 0 0	0 0 0 0 0	7 0 0 0 0 0 0	0 0 0 0 0 0 0 0
	175	164	2	0	9	0

^{*} In for repairs at shops. ** Ordered out of service.

Seven (7) of the 246 engines inspected were hot and only ash pan inspections were made, due to this fact.

FRONT ENDS

No defective front end screens were found in the Main Line engines inspected, which proves beyond doubt the efficiency of the boiler departments in establishing such an excellent record.

The front end screens in the locomotives operated by Logging Companies were in a great many cases defective. This fault can very easily be remedied by the Logging Company's Officials. They should compel the engine crews or master mechanic in charge of their locomotives to make more frequent inspections of the front end screens. It requires but a few minutes of the engine crew's time to open and inspect a front end after they have completed their day's work and for this reason there is no good excuse for a defective front end screen. When the screen begins to show signs of wear it should be removed and a new one put in service.

ASH PANS

Two of the 175 Main Line locomotives inspected were found with defective ash pans and one of these engines was tied up in the shops for repairs. Eleven (11) of the 71 Logging locomotives inspected had defective ash pans; in most cases ash pans were not screened in properly.

STACK HOODS

Eleven (11) of the 71 Logging locomotives operating in timber regions were found to have defective stack hood screens. A few of the Logging locomotives were operating during dry and dangerous fire periods without a stack hood screen, in such cases they were ordered to be put on immediately. When repairs were ordered by State Inspector a report by the Logging Company that these repairs were made and date of same was mailed to the Wisconsin Conservation Commission.

RECORDS OF INSPECTION

In all roundhouses of the Main Line Railroads, records of front end and ash pan inspections are kept and can be inspected at any time. I have examined these inspection books in every Main Line Roundhouse and found them to be up-to-date in every case.

RIGHTS OF WAY

The rights of way in almost every case were found to be in good condition but there still seems to be some carelessness on the part of the section men in allowing their fires to escape when burning off the rights of way in the spring of the year.

F. G. KILP, State Locomotive Inspector.

The following table shows the rating of the different logging locomotives:

Location	Name of Lumber Company	Total	G.	F.	В.	R.	o.s.
Crandon Wausau Spirit Fails Winchester Winegar Morse Foster Loretta Stinson Spur Ladysmith Ladysmith Ladysmith Ladysmith Ladysmith Ladysmith Canna Nekoosa Port Edwards Rothchild Tipler Goodman Pembine Soperton Blackweil Carter Townsend Medford Philips Park Falls Park Falls Park Falls Park Falls Orummond Grandview Summit Lake Pearson	Lioyd McAipine Logging Co. Underwood Veneer Co Frank Tyler Lbr. Co. Turtle Lake Lbr. Co. Vilas County Lbr. Co. Vilas County Lbr. Co. Kneeland McClurg Lbr. Co. Foster Latimer Lbr. Co. Park Falls Lbr. Co. J. H. Kaiser Lbr. Co. J. H. Kaiser Lbr. Co. Fountain Campbell Lbr. Co. Great Western Paper Co. Flambeau River Lbr. Co. Great Western Paper Co. Hackley Phelps Bonnell Lbr. Co. Connor Land & Lbr. Co. Connor Land & Lbr. Co. Nekoosa Port Edwards Paper Co. Nekoosa Port Edwards Paper Co. Nekoosa Port Edwards Paper Co. Marathon Paper Mills Co. Goodman Lbr. Co. Goodman Lbr. Co. Sawyer Goodman Lbr. Co. Menominee Bay Shore Lbr. Co. Flanner Steger Land & Lbr. Co. O'Neva Lbr. Co. Medford Lbr. Co. Medford Lbr. Co. Roddis Lbr. Co. Park Falls Lbr. Co. Park Falls Lbr. Co. Rust Owen Lbr. Co. Rust Owen Lbr. Co. Langlade Lbr. Co. Langlade Lbr. Co.	1112222221211312311112222222336433211	0 1 0 0 0 0 2 2 2 0 0 1 1 0 2 2 3 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	100011000000000000000000000000000000000	0001111000122000000111001112200000011	000000000000000000000000000000000000000	000000000000000000000000000000000000000
		71	43	7	18	3	0

Key—G., good; F., fair; B., bad; R., in for repairs at shops; O. S., ordered out of service.

Wisconsin Conservation Commission.

Gentlemen—I herewith submit to you my report of Locomotive and right of ways inspected during 1922.

The following table shows the number of Locomotives inspected and their classification as to condition at the time of inspection:

Good	Fair	Bad	Repair	O. S.	N. B. U.	Total
222	44	13	19		7	305

The following is a table of the rating of locomotives inspected at the Main Line Round Houses:

•	Good	Fair	Bad	Repair	o. s.	N. B. U.	Total
Northern Pacific Ry. C. & N. W. Ry. C., St. P., M. & O. Ry. Soo Line Ry. C., M. & St. P. Ry. Wis. & Mich. Ry. G. B. & W. Ry. Central Wis. Ry. Marinette, T. & W. Ry. Stanley, M. & P. Ry. Duluth, S. S. & A. Ry.	45 28 49 24 3 17	3 6 3 4		::::::			3 48 37 52 29 3 17 3 4
Totals	174	19	4	3			200

Repair, in for repairs at shops; O. S., ordered out of service; N. B. U., not in use at time of inspection.

MAIN LINE LOCOMOTIVES

Front end nettings—Only two (2) of the two hundred (200) locomotives inspected were found with defective front end netting and in each case they were very small holes. In both cases these nettings were repaired immediately.

Ash pans—Seventeen defective ash pans were found on the two hundred (200) engines inspected. Four were defective and were repaired before the engine made another trip. In most all cases these defective pans were found during or immediately after the shopcraft strike.

LOGGING LOCOMOTIVES

Front end nettings—Twenty-five (25) engines had defective front end nettings and four engines were found to be running with no front end nettings.

Ash pans—Four (4) engines were found with defective ash pans and one engine was running with no damper doors on the ash pan.

Spark arresters on stacks—Six (6) engines were found with holes in their spark arresters and six (6) were running with no spark arresters on the stack.

MAIN LINE LOCOMOTIVES

	Tot'l Number inspected	Number defective	Percentage
Front netting	200 200	2 17	1% 8.5
LOGGING	LOCOMOTIVE	8	
	Total number Inspected	Number defective	Percentage
Front nettings. Ash pans. Spark arresters.	105 105 105	29 5 12	27.5 4.5 11.4

RECORDS OF INSPECTION

In all cases where I examined inspection books, which are kept at all Main Line Round Houses and show the dates when inspections were made of front ends and ash pans, they were found to be up-to-date.

RIGHT OF WAYS

In most all cases where I examined and inspected right of ways they were found to be in as good condition as could be expected.

F. G. Kilp.

The following table shows the rating of the different Logging Locomotives:

Location	Name of Lumber Company	Total	G.	F.	В.	R.	o.s.	N.B.S.
Blackwell	Flanner Steger L. & L. Co	4	1	1	0	1	0	1
Goodman	Goodman Lb. Co	5	2	1	2	0	0	0
Tipler	Sever Anderson Lb. Co	2	1	1	. 0	0	0	0
Tipler	Tipler Grossman Lb. Co	3	0	3	0	0	0	0
Leona	Conner Land & Lb. Co	3	2	0	1	0	0	0
Soperton	Menominee Bay Shore Lb.		i				l	
	Co	4	4	0	0	0	0	0
Townsend	Holt Lb. Co	4	3	1	0	0	0	0
Townsend	Oconto Lb. Co	1	1	0	0	0	0	0
Loretta	Park Falls Lb. Co	3	0	0	1	2	0	0
Ladysmith	Fountain Campbell Lb. Co.	2	0	1	0	1	0	0
Tony	L. E. Meyers Const. Co	1	0	0	1	0	0	0
Rib Lake	Rib Lake Lb. Co	4	2	1	1	0	0	0 2 2 0 0
Medford	Medford Lb. Co	6	4	0	0	0.	0	2
Kennedy	New Dells Lb. Co	3	1	0	0	0	0	2
Tomahawk	Frank Thieler Co	1	1	0	0	0	0	0
Luggerville	West Lbr. Co	2	0	0	2	0	0	0
Philips	Kneeland McClurg Lb. Co	4	2	1	0	1	0	Ö
Park Falls	Roddis Lb. Co	1.	1	0	0	0	0	0
Park Falls	Park Falls Lb. Co	3	0	2	0	1	0	0
Park Falls	Flambeau River Paper Co	1	0	1	0	0	0	Ŏ
Port Edward.	Nekoosa Edwards Paper Co.	1	1	0	0	0	0	0 0 0
Nekoosa	Nekoosa Edwards Paper Co.	1	1	0	0	0	0	0
Fairchild	Marathon Paper Mills Co	1	0	1	0	0	0	Ō
Tomahawk	R. C. Thielman	1	0	0	1	0	0	0
Star Lake	A. H. Stange Co	1	1	0	0	0	0	0
Merrill	Kinzel Lb. Co	2	1	0	1	0	0	0
Tripoli	Bissell Lb. Co	2 4	1	1	0	0	0	0
White Lake	Yawkey Bissell Lb. Co	4	0	3	0	1	0	0
Pearson	Langlade Lb. Co	2	1	0	0	1	0	0
Winchester	Turtle Lake Lb. Co	3	1	1	0	1	0	0
Winegar	Vilas County Lb. Co	2	2	0	0	0	0	Ŏ
Phelps	Hackley Phelps Bonnell Co.	2 3 2 2 3	0	1	0	1	0	0
Rhinelander	Thunder Lake Lb. Co		2	0	0	1	0	Ō
Pembine	Sawyer Goodman Lb. Co	4	0	3	0	1	0	Ō
Owen	J. S. Owen Lb. Co	5	5	0	0	0	0	O.
Westboro	Holland Walsh Co	1	0	1	0	0	0	0
Hiles	Fish Lb. Co	1	1	0	0	O	0	0
Gildden	Mellen Lb. Co	2	2	0	0	0	0	Ŏ
Mellen	Mellen Lb. Co	2 2	1	0	0	1	0	0
Foster	Foster Latimer Lb. Co	2	1	0	0	1	0	0
Bayfield	Wachsmuth Lb. Co	2	l o	1	Ŏ	1	0	0
Drummond	Rust Owen Lb. Co	ã	1	0	0	1	0	1
Carter	O'Neva Lb. Co	1	1	0	0	0	0	Ô,
Totals		105	48	25	10	16	0	6

G., good; F., fair; B., bad; R., in shops for repairs; O. S., ordered out of service; N. B. U., not being used at time of inspection.

SUMMARY OF FOREST, MARSH AND SWAMP FIRES

During 1920, as Reported by 522 Town Chairmen out of 688 in Northern Counties

Two hundred and eighty fires were reported as having burned over 404,059 acres. One hundred and thirty-five fires, or 49%, were reported with itemized or estimated losses and damages as follows:

Estimated Losses		Unestimated Losses
	Value	
8 houses	\$10.850.00	3 houses
14 barns	9.550.00	2 barns
1 sawmill	19.200.00	2 bridges.
Hay	4.500.00	1 small sawmill
Timber, young growth.		Great quantities of game.
fences poles and mis-		Damage to soil and young growth on
cellan ous losses	181,592.00	practically all of 404,059 acres of
		burned over country.
	\$225 BO2 NO	

Five thousand two hundred and ninety-one men fought at 190 fires, or 68% of those that occurred. This cost the local towns \$14,546.04 at 136, or 48%, of the fires that occurred. At 50% of the fires services were volunteered, while 2% of the fires were allowed to run without an effort being made to stop them. Sixty-five fires, or 23%, starting from known sources, caused damage estimated at \$20,287.00. Seventy fires, or 24%, originating from sources unknown, caused damages estimated at \$57,035. One hundred and forty-five fires, or 51%, caused damages which were not estimated. One hundred and fifty-nine fires, or 57%, were caused from unknown sources. One hundred and twenty-one fires, or 43%, were caused from known sources.

Causes of Fires Percentage of fires during spring, summer and fall seasons

Railroads	34 fires or 12 - %	40% in October.	or 110 fires
Lumbering		16% in May,	or 46 fires
Brush burning	59 fires or 21 6	4 % in April.	or 12 fires
Campers and Hunters	11 fires or 4 %	18% in Sept	or 51 fires
Incendiary	2 fires or 15%	11% in August.	or 31 fires
Miscellaneous		3% in July	or 7 fires
Unknown	164 fires or 59 %		or 6 fires

MONEY SPENT BY STATE FOR FORESTRY AND FIRE PATROL ACTIVITIES DURING 1920

For protection of state lands against fire and trespass, and	
upkeep of buildings, roads, etc., on this property\$	20.456.37
For fire patrol and protection on lands other than state lands:	
State government	8,748.67
Federal government	2,813.67

County	No. of	Acres	Property	Cost to
	Fires	Burned	Loss	Towns
Adams	2 3	2,510 3,780	\$ 600.00 1,800.00	\$ 95.00 134.46
Barron Burnett Bayfield	1 3 26	1,400 41,460	350.00 30,800.00	143.46 1,391.45
Clark	23	75,837	8,875.00	115.00
Chippewa	1	600	1,000.00	
Dunn	3	412	100.00	
Douglas	11 1 7	34,490 20,600	53,400.00 500.00 900.00	2,256.45
Florence. Forest. Iron.	7	2,490	1,200.00	179.25
	2	450	3,000.00	104.50
	3	2,250	600.00	123.50
JacksonJuneauLanglade	2 1 6	3,000 300 1,680	500.00 1,000.00 100.00	20.00
Lincoln	9 9 3	4,455 7,247 110	770.00 2,050.00 100.00	1,055.00 33.00
MarathonOcontoOneida	15	22,215	89,420.00	923.40
	9	26,010	1,700.00	464.95
	18	23,015	4.310.00	665.90
Price	17	12,700	1,275.00	1,317.27
	22	22,285	1,672.00	1,209.34
	18	51,412	9,945.00	285.85
Wasburn Waushara Polk	6 1 1	7,500 4 750	50.00	92.00
Portage	7	2,452	200.00	1,445.45
Rusk	6	3,610	3,500.00	20.00
Shawano	5	2,128	25.00	32.50
Sawyer	4	14,580	250.00	598.00
Taylor	28	12,323	5,700.00	1,512.00
	280	404 ,059	\$225,692.00	\$14,546.28

PER CENT OF FIRES IN EACH COUNTY DURING FIRE SEASON OF 1920

Taylor 10%	Oconto 3%	Florence 2%	
Bayfield 9%		Shawano 2%	
Clark 8%	Marinette 3 %	Sawyer 1%	
Vilas 8%	Washburn 2 %	Ashland 1%	
Oneida 6%	Rusk 2 %	Burnett 1 %	
Wood 6%	Portage 2 %	Dunn	
Price 6%	Langlade 2%	Monroe 1 %	
Marathon 5%	Eau Claire 2%	Iron 1%	

Counties not on this list are less than 1%.

SUMMARY OF FOREST, MARSH AND SWAMP FIRES DURING 1921

Reported by 471 Town Chairmen out of 706 in Northern Counties

One hundred and thirty-seven fires were reported as having burned over 38,044 acres. Seventy fires, or 51%, were reported with estimated losses as follows:

Two houses and one barn damaged\$	735.00
900,000 feet of decked logs damaged	1,800.00
Two automobiles damaged	1,000.00
Nine stacks of hay burned	500.0 0
Logging camp damaged	500. 00
12,000 feet of logs burned	200.00
Damage to timber land, marsh hay land, and young growth of	
timber	31,677.00

\$36,412.00

Sixty-seven fires, or 49%, were reported with unestimated losses. One thousand and thirty-seven men fought at 87 fires, or 63% of those that occurred. Bills were paid for fire fighting by the local towns at 69, or 50%, of the fires. The cost to local towns to fight these fires amounted to \$5,752.17. At 20, or 14%, of the fires, services were volunteered by the people living in the towns in which they occurred, while at 42, or 30%, of the fires no effort was made to check them. Twenty-nine, or 21% of the fires, starting from known causes, caused damages estimated at \$11,467.00. Thirty-six fires, or 26%, originating from unknown sources, caused damages estimated at \$24,945.00. Seventy-two fires, or 53%, caused damages which were unestimated by the town chairman in whose towns they occurred. Sixty-three fires, or 46%, were caused from known sources. Seventy-four fires, or 54%, were caused from unknown sources.

Causes of Fires Percentage of fires by months

Lightning Railroads Land clearing Lumbering Campers and hunters Incendiary Miscellaneous	8 fires 6% 29 fires 21% 2 fires 1% 13 fires 10% 3 fires 2%	April May June July August September October November	12 fires 8.5% 29 fires 21 % 18 fires 13 % 23 fires 17 % 24 fires 18 % 21 fires 17 % 6 fires 4 %
Miscellaneous Unknown	5 fires 4%	October November	6 fires 4 %

MONET SPENT BY STATE AND GOVERNMENT FOR FORESTRY AND FIRE PATROL ACTIVITIES DURING 1921

For upkeep of buildings on state lands, roads and trail construction and maintenance, etc., on this property.......\$16,036.03

For protection against fire and trespass on state lands and lands other than state owned:

State government 12,818.23
Federal government 3,532.87
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BIENNIAL REPORT

LOSS BY FIRE FROM 31 COUNTIES

Name of County	No. of fires	Property loss	Costs to towns	No. of men employed to fight fires	Acres burned
Adams	4 2	\$ 50.00 1,900.00	\$ 10.00 36.00	67 10	1,155 20
BarronBurnett	1 1 5	500.00 500.00 165.00	439.35	48	200 1,605
Bayfield	11 2 5	450.00 1,700.00	91.85	91 62	1,008 700 4,800
Dunn. Forest. Florence.	2 1 6	15.00 750.00	199.15 112.50	· 10	55 150 793
Iron Jackson Juneau	6 3 4	3,875.00 1,520.00 800.00	188.80 7.00 10.00	37 25 6	965 460 920
Lincoln	5 5 7	4,500.00 350.00	58.00 47.70 21.00	31 20 44	435 224 708
Marinette Monroe	6 2 2	100.00	338.50 132.00	27 35 12	1,790 540 700
Oneida Outagamie Polk	14 2 2	2,190.00 600.00 250.00	374.75 51.00	84 21 15	1,404 300 40
Price	3 11 2	25.00 8,600.00 250.00	37.50 2,618.60 7.00	15 193 2	6,652 310
Shawano Taylor Vilas	1 7	872.00	535.00	133	. 200 300 3,878
Wood	12 2	5,815.00 25.00	238.28	30	7,120 615
Totals	137	36,412.00	5,752.17	1,037	38,044

Twelve fires burned in the above named counties and no estimates of the number of acres burned was made by the town chairmen to the State Conservation Commission.

PER CENT OF FIRES IN EACH COUNTY DURING FIRE SEASON OF 1921

SHIPMENTS OF TREES FROM STATE NURSERY

1921	State Lands	Private Parties
White pine		41.433
Norway pine		16.508
Contab mine		12,450
Scotch pine		
Norway spruce	5,600	93,130
White spruce		16,600
Colorado blue spruce	. . 	7,200
Green ash		400
European larch		4.360
Jack nine		1.650
White cedar		5.050
Miscellaneous		
·	255,925	199,351

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1922

White pine	-	1.810
Norway pine		13,260
Scotch pine 71,910		13.800
Norway spruce		6,800
White spruce		5,975 300
European larch		1.000
Jack pine		137
83,710	-	43,082

During the spring of 1922, 5.100 trees were planted on State Park tand, and are included in the State Land total.

DISTRIBUTION BY HATCHERY

1921		
Madison Hatchery Brook trout fry fingerling No. 1 Brook trout fry fingerling No. 3 Ralnbow trout fingerling No. 1 Brown trout fingerling No. 1 Miscellaneous Wall-eyed pike fry	237,000 1,200 702,000 6,000 152 15,300,000	16 . 246 , 352
Bayfield Hatchery Brook trout fingerling No. 1 Brown trout fingerling No. 1 Rainbow trout fingerling No. 1 Salmon fry. Silver trout fry Lake trout fry Whitefish fry Miscellaneous	1,258,400 289,000 561,200 126,000 3,641,000 2,949,250 3,250,000 742	12,075,592
Oshkosh Hatchery Wall-eyed pike fry		10.350.000
Minecqua Hatchery Wall-eyed pike fry Black bass fry	13,500,000 264,000	13,764,000
Delafield Hatchery Wall-eyed pike fry. Black bass fingerling No. 2. Roach and sunfish fingerling No. 2. Miscellaneous	52,700 5,000	16,708,800
Wild Rose Hatchery Rainbow trout fingerling No. 1 Miscellaneous	793,500 624	794,124
Spooner Hatchery Wall-eyed pike fry		13,500,000
St. Croix Falls Hatchery Brook trout fingerling Brook trout fingerling No. 3 Brown trout fingerling No. 1 Brown trout fingerling No. 3	1,697,400 928,050 332,400 36,100	2,993,950
Sheboygan Hatchery Lake trout fry Whitefish fry Silver trout fry	3,100,000 14,950,000 1,000,000	
Sturgeon Bay Lake trout fry		19,050,000 3,050,000
Mississippi River Black bass fingerling No. 3 Black bass yearling Catfish fingerling Croppies yearling Croppies yearling Croppies fingerling Catfish yearling Sunfish yearling	6,400 1,260 9,200 400 7,600 760 720	26.340

BIENNIAL REPORT

DISTRIBUTION BY HATCHERIES

1921

State of Illinois Black bass fingerling exchange for other fish		9,000
Wolf River, Gills Landing Pickerel fingerling	•	6,845
Neenah White bass		169.000
Planted above dam	153,000	100,000
Distributed	16,000	
Miscellaneous		222
	10	8.933.725

DISTRIBUTION BY SPECIES

1921

Brook trout fingerling No. 1 Brook trout fingerling No. 3 Brown trout fingerling No. 1 Brown trout fingerling No. 3 Rainbow trout fingerling No. 3 Rainbow trout fingerling No. 1 *Wall-eyed plke fry Black bass fingerling No. 2 Black bass fingerling No. 2 Black bass fingerling No. 3 Lake trout fry Whitefish fry Silver trout fry Roach and sunfish fingerling No. 2 Catfish fingerling Catfish yearling Cropples fingerling Cropples fingerling Cropples fingerling Sunfish yearling Sunfish yearling Whitee bass fingerling White bass fingerling White bass fingerling	36.100 2,056.700 69,300,000 52,700 15,400 9,099,250 18,200,000 4,641,000 126,000 9,200 7,600 7,600 6,845 169,000
White bass fingerling Miscellaneous Black bass yearling	169,000 2,840

*The small number of pike fry was due to the lack of funds.

DISTRIBUTION BY HATCHERIES

1922		
Madison Hatchery Brown trout fingerling No. 1 Rainbow trout fingerling No. 1 Pickerel fry Wall-eyed pike fry	37,800 1,577,600 840,000 10,800,000	13.255.400
Bayfield Hatchery Brook trout fingerling No. 1 Brook trout fingerling No. 3 Brown trout fingerling No. 1 Lake trout fry. Lake trout fingerling No. 3 Salmon fry. Salmon fingerling No. 3 Whitefish fry. Rainbow trout fingerling No. 1 Rainbow trout fingerling No. 3	1,256,300 30,825 536,200 5,496,000 34,955 112,705 31,400 5,600,000 381,000 75,000	13,253,400
Oshkesh Hatchery Wall-eyed pike fry		24,750,000
Minocqua Hatchery Wall-cyed pike fry Pickerel fry Muskellunge fry Black bass fry	50,350,000 714,000 200,000 732,000	51,996,000

Delafield Hatchery Wall-eyed pike fry Black bass fingerling No. 2. Black bass fingerling No. 3. Roach fingerling No. 2.	19,350,000 840,000 21,000 82,000	20,293,000
Wild Rose Hatchery Rainbow trout fingerling No. 1		1,079,800
Spooner Hatchery Wall-eyed pike fry		24,750,000
Eagle River Hatchery Wall-eyed pike fry		19,800,000
St. Croix Falls Hatchery Brook trout fingerling No. 1 Brook trout fingerling No. 2 Brook trout fingerling No. 3 Brook trout fingerling No. 4 Brown trout fingerling No. 1 Brown trout fingerling No. 2 Brown trout fingerling No. 2 Brown trout fingerling No. 3 Brown trout fingerling No. 4 Rainbow trout fingerling No. 4	704,000 1,946,400 625,200 180,400 206,400 247,800 105,600 1,500 294,400	4,311,700
Shebeygan Hatchery Whitefish fryLake trout fry	12,950,000 4,500,000	
Sturgeon Bay Hatchery Lake trout eggs planted		17,450,000 5,000,000
Brook trout fingerling No. 1	1,960,300 1,946,400 656,025	
Brook trout fingerling No. 1 Brook trout fingerling No. 2 Brook trout fingerling No. 3 Brook trout fingerling No. 4	1,946,400 656,025 180,400	
Total brook trout Brown trout fingerling No. 1 Brown trout fingerling No. 2 Brown trout fingerling No. 3 Brown trout fingerling No. 4 Total brown trout	780,400 247,800 105,600 1,500	4,743,125 1,135,300
Rainbow trout fingerling No. 1	3,332,800 75,000	1,100,000
Total rainbow trout		9 407 900
Wall-eyed pike fry. Black bass fry. Black bass fingerling No. 2.	732,000 840,000	3,407,800 32,000,000 149,800,000
Wall-eyed pike fry Black bass fry Black bass fingerling No. 2 Black bass fingerling No. 3 Total black bass	732,000 840,000 47,400	32,000,000
Total black bass	840,000	32,000,000 149,800,000 1,619,400 1,554,000 200,000
Pickerel fry	9,996,000	32,000,000 149,800,000 1,619,400

BIENNIAL REPORT

DISTRIBUTION BY HATCHERIES

1922

U. S. Government rescue work Miscellaneous fish, 4 car loads		70,265
Illinois Fish Commission exchange for other fish Black bass fingerling No. 3		26,400
Neenah Dam, rescue work White bass and perch fingerling No. 3	0 101 000	2,151,550
Planted above dam	2,131,000 20,550	
Laona, rescue work Wall-eyed pike, large		138
Wanpaca, rescue work		100
Pickerel fingerling No. 3		89.200
Prairie du Chien, rescue work		
Miscellaneous fish		24,800
Portage, rescue work		
Black bass fingerling No. 3		3,200
Ossee, rescue work		
Miscellaneous fish		4,000
Adams, rescue work		
Miscellaneous fish		575
Wall-eyed pike eggs to Illinois Fish Commission in ex- change for other fish	_	32,000,000
	_	230,112,458

OF THE

STATE CONSERVATION COMMISSION

OF WISCONSIN

200, 7111

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BIENNIAL REPORT

OF THE

STATE CONSERVATION COMMISSION

OF WISCONSIN

FOR THE

Fiscal years ending June 30, 1923, and June 30, 1924



Madison, Wisconsin 1924

THE CONSERVATION COMMISSION

ELMER S. HALL, Commissioner,

C. L. HARRINGTON, Supt. of Forests & Parks,

B. O. Webster, Superintendent of Fisheries,

MATT PATTERSON, Secretary.

Freeling hits

LETTER OF TRANSMITTAL

HONORABLE JOHN J. BLAINE,

Governor of Wisconsin.

SIR: Agreeable to the provisions of law, we herewith submit a biennial report of the activities of the Conservation Commission of the State of Wisconsin; and trust that it will meet with your approval.

Respectfully submitted by

ELMER S. HALL,

Commissioner of Conservation.



A Beaver and His Home



The State Forest Tree Nursery at Trout Lake, Vilas County, Wis.

FOREWORD

ELMER S. HALL, Commissioner.

One of the outstanding developments of the past fifty years not only in Wisconsin but in the nation has been the relatively rapid depletion of our natural resources. Many of these resources are replaceable; others are not. The ore of a mine once extracted cannot be restored but resources like forests, the wild life of field, marsh and woodland, the fish in lakes and rivers has within itself the capacity to replenish and increase. The history of mankind demonstrates beyond question that whenever a people came in contact with a natural resource of almost unlimited supply that they took liberally of this supply to satisfy their needs with consequent waste and destruction. Such is the particular story of our natural abundance of fur, fish, forests and game and also of the supplies of iron, coal, oil, gas and other mineral wealth. It is a well founded observation that the American people as a people lived up to this natural tendency and took liberally of the natural resources with which they were endowed, with but little thought, until of recent years, as to the replacement of these resources.

The conservation movement started in this country in an active way about thirty years ago. Its progress has been rapid. This is especially true of the last ten years. Today this movement enlists the support of the most thoughtful and best informed citizens, and every state has laws and regulations for the exploitation of its natural wealth. Wisconsin is not lacking in this connection and is now making a determined effort to re-establish her once abundant supplies of commercial timber, her fisheries, her game, and to preserve her scenic and historic places.

The present conservation commission was established by

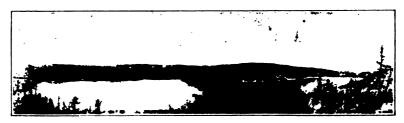
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legislative act in 1915. It consolidated all state activities relating to fish, forests, game and state parks and merged the affairs of the state board of forestry, the fish commission, the game department, the state park board and what had been known as the conservation commission. Prior to the legislative session of 1923 the commission was composed of three men but during the 1923 session a further consolidation took place and at the present time the commission operates under a single commissioner with assistants acting as superintendents of state fish hatcheries and state forests and parks respectively.

The broad scope of the work with the constantly increasing demands in the various activities of the department have made it difficult to administer the affairs of the conservation commission because of the limited appropriation available for the work.

Every county is desirous of a game warden, which is justified by the constantly increasing number of hunters and fishermen who throng the country-side during the open seasons. Throngs of nonresident fishermen crowd the lakes and streams during vacation time, and there is a pressing need for a larger propagation and planting of fish.

The larger use of state parks and the increasing hazard of forest fires all taken together seem to justify the budget request for additional money to carry on the work and the receipts of the department apparently warrant this without laying any tax upon the people of the state.



Devils Lake State Park

FISHERIES DIVISION

Of the activities of the present Conservation Commission undoubtedly the one first started was that of fish propagation. It is interesting to note that the first fish hatchery was established in 1875. This hatchery is located at Madison and has been in service as a fish propagating institution ever since. Since that time thirteen additional hatcheries have been organized which serve as places where fish are hatched and from which they are distributed. It may be said that during all these years there has been a steady and continuous improvement in the methods used at the hatcheries particularly in the way of collecting the eggs, the handling of brood fish, and the distribution of the fry and fingerlings. These improvements have been especially gratifying during the past two years and have made it possible for the hatcheries of the state to distribute better qualities of trout from the trout hatcheries and better and larger quantities of pike and bass and other kinds of fish from the other hatcheries specializing in these species. In addition to the Madison hatchery mentioned above, which is located about four miles out of the city and which makes a specialty of rainbow and brown trout, the Bayfield hatchery has been established. This station is located on the shore of Lake Superior about two miles south of the city of Bayfield and here the state carries on commercial fish work and handles annually millions of lake trout for planting in Lake Superior as well as the hatching and distribution of millions of brook and brown trout for the inland waters and which are of primary interest to sportsmen.

Another trout hatchery is located at Wild Rose in Waushara County where brown, brook and rainbow trout are raised. At St. Croix Falls in the state park is located a trout hatchery that is unique in that the water supply is taken from a hill which enables it to be carried into the fourth floor of the hatchery building, making it possible to hatch fish on all four floors. The customary method of hatchery construction is to have this work done on one floor only which is generally a matter of compulsion on account of the lay of the land. The specialty at the St. Croix Falls hatchery is brook trout but the commission also rears and distributes all kinds of other trout that flourish in Wisconsin streams.

The above named places are in operation the entire year and each has a superintendent with sufficient help to take care of the work. Our pike stations, however, are only operated in the spring during the pike hatching season and in addition to a pike station at Madison we hatch pike at the following places:—Spooner, Eagle River, Oshkosh, Woodruff and Delafield. At Woodruff and Delafield, in addition to the pike work, we carry on operations in black bass culture which immediately follows the season for wall-eyed pike. At the Woodruff station the hatching of muskellunge has been carried on

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with some success when it has been possible to get the eggs. During the past few years there has been a very noticeable increase in the interest taken in the rearing of muskellunge. This has been stimulated by what have appeared to be the gradual decreasing numbers of this valuable species and in the future the commission will redouble, its efforts to increase the output of this important fish for the waters of the state.



A Pike Hatchery During Shipping Season

The two hatcheries on Lake Michigan are devoted to the commercial fish of that lake and are located at Sheboygan and Sturgeon Bay. The lake trout, whitefish and lake cisco eggs propagated in these hatcheries are obtained from Green Bay and Lake Michigan and each hatchery has a capacity of about sixteen million eggs. This season we are trying the experiment of introducing Lake Erie cisco in Lake Michigan. We have several million Lake Erie cisco at the Sheboygan hatchery that will be reared and planted in the lakes sometime next spring. Another experiment that is being tried for the benefit of the commercial fishermen is the introduction of Pacific Coast salmon in Lake Superior. This work has been going on for about three years and we soon anticipate substantial results from it.

The last session of the legislature authorized the building of two new trout stations. These stations are located near Hayward in Sawyer County and Lakewood in Oconto County. As the appropriation made was only \$2500 for each establishment it was necessary to '''' only a small sub-station which will be supplied with eggs from

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one of the larger hatcheries this season. If it is found that the locations are well adapted for the successful culture of treut they can be enlarged as money is available. It is the hope and aim of the commission to increase our hatching facilities until we have at least one hatchery for every four counties which will enable us to make all our distribution by means of trucks which will mean a great saving of time and especially at a season of the year when the time element is of great importance from the very nature of our operations. There will also result from prompt and expeditious distribution a much greater benefit to the streams of the state from the fish planted in them. The time is at hand and the demand of interested citizens is such that our streams and lakes must be supplied with greater quantities of fish if we are to maintain our position as a splendid fishing region.

FORESTS AND PARKS

The President recently said:

"Strange as it may seem, the American people, bred for many generations to forest life, drawing no small measure of their wealth from the forest, have not yet acquired the sense of timber as a crop. These immense stretches of cut-over lands, mostly too rough or too sterile for tilling, have not awakened us to their vast potential worth as growers of wood. Fully one-fourth of our land area ought to be kept in forest—not poor, dwindling thickets of scrub, but forests of trees fit for bridges and houses and ships. Handled by the best timber-cropping methods, our present forest lands could be made to grow even more timber each year than we now use. But much of our cut-over land, lying idle or half productive, is now an immeasurable loss. It pays little or no taxes, it keeps few hands busy, it turns few wheels, it builds no roads. Idle forest land has scrapped schools, factories, railroads, and towns; it has dotted the land with abandoned farms; it has created a migratory population. Our forest problem is a land problem of the first magnitude."

OUR CITIZENS INTERESTED

The people of Wisconsin are interested in forestry. Analyze it any way you may, the fact remains that the recent constitutional amendment on forestry was approved by the substantial majority of 162,797 votes. This is indicative more than anything else of the mind of the people of the state on this subject.

WHAT CAN BE DONE

The question that now naturally arises is,—What can be done at present to restore the forests of the state on suitable lands, and in a manner compatible with our needs? In order to answer this question it is well to keep in mind the compelling economic factors, for this is almost entirely an economic question, that in reality has made the present forest problem. The first sawmill was erected in Wisconsin

in 1831. At that time timber possessed little or no value. It was too abundant. The hardwoods were not worth anything. Pine was the only wood that could be cut to any advantage. There was great waste in the woods and only the finest trees were utilized. From that year, however, there has gradually developed a certain code of economic practices in forest exploitation, the operations of which has left great areas of cut-over land in the wake of the axe and saw and has led to a relatively rapid depletion of this valuable resource. forest practices, therefore, have in reality made the present forest problem, which may be stated as follows,-That great areas of idle land now exist in the state that can be made productive only by a crop of forest trees, and that a vanishing supply of timper as a necessary material in every industrial process, and in the health and comfort of the population, with steadily rising prices for what is left-has caused a demand for the restoration of this basic resource. These methods of forest exploitation, both past and present, have their weakness in that at no time has sufficient consideration been given to the protection of the young trees, with the result that these great areas of strictly forest lands which should now, under proper forestry practices, be supporting a young forest of great value, are denuded.

AN ECONOMIC QUESTION

The fact remains, however, that the methods of forest removal of the past, and in a large measure those of the present, have developed and are in existence, because, everything else considered, they are the only possible ones that could survive the economic condition of the times. The very abundance of the resource itself and the economic stress of the early days laid the foundation for our present business methods in the woods and these methods have developed, not because of any individual or concern, or series of them, but in spite of them. The lumbermen cut what the trade demanded, and the customers for forest products during all periods were the people themselves. They wanted the best and they wanted it cheap, and the man or concern who got it out that way got the business. All others failed. Competition was and is the order of the day. Individual competes with individual, concern with concern, and region with region. The forests of the South and West compete with the forests of the lake states, and only small changes in prices or freight rates will force operators in Wisconsin to abandon trade territory to operators from the south and west coast. It might have been better in the long run to have had strict regulation of forest cutting right from the beginning, with complete utilization and no waste in the woods or mills and with adequate fire protection for all forest and cut-over lands, so that the young trees that were seeded naturally would have had a chance to grow to merchantable size. However, such a process would have been expensive and the public would have had to foot the bill. This the public was not willing to do. Of course, from an economic standpoint, such regulation was well-nigh impossible.

It seems to be the rule that whenever a people come in contact with a great and abundant resource that they take of that resource in a liberal and wasteful manner and let the future take care of itself. Such has been the history of development in all our natural resources. In reality, therefore, in attempting to solve the forest problem we are seeking to change the established methods of operation and of business procedure in this particular field that have been in effect in our state for almost a century. Of course, it is obvious that this cannot be done abruptly, but that gradual improvements should be made from year to year as the opportunity serves, with the result that in the long run a timely and complete solution of our forest problem will result. Then our strictly forest areas will be growing a crop of timber as they should be doing. Whenever the people of the state really want this done it will be done, and the sooner we can bring this condition of affairs about the better and less expensive it will be for all of us.

BEGINNING OF FORESTRY

The first interest in the work of forest perpetuation appeared about 1867 in a report to the legislature on the destructive effects of forest removal and of fire. By the year 1900 the great bulk of the soft wood supplies of the state had been logged, and during these years the interest in forestry as such was not pronounced. The past twentyfive years, however, has witnessed a rapidly developing interest in this subject. It may be said at the present time that no group of citizens anywhere is more keenly or vitally interested in this movement than those owning and exploiting the forest itself. As the years sped by closer utilization of the forest itself became the rule until we now witness what amounts to a clean cutting in woods operations. Small inferior trees that possessed no value twenty-five years ago are now logged. Timber values have risen, and as they did it became more and more possible from an economic standpoint to become interested in the growth of young trees. Today we stand on the threshold of real accomplishment in forest restoration with active, private, as well as public interest in this undertaking. With this introduction we can pass to the most important item in our forest perpetuation program.

1. Adequate protection of all forest and cut-over lands from fire. Unless young trees are protected we can have no future forests. This is obvious. Mature timber should be harvested. This work should be done in a way so that young trees of unmerchantable size will be protected and with some thought to promoting seeding by natural methods. The forest trees of Wisconsin will reproduce vigorously if they are given a chance, and if protected will grow to merchantable size and be valuable.

Adequate fire protection means a decided expansion of the activities now directed by the state through this commission. Five special fire districts are organized, each comprising about one million acres. Three others are authorized. There is still a great deal of work to be done to perfect the organizations, and to properly equip each district.

It is not proposed that the state shall do all the work, nor assume all responsibility in this program of fire prevention and control. There is a strong local responsibility that should be recognized, and assumed by local agencies either private or public. The causes of these fires are due primarily to local agencies, and while the state is interested in the prevention and suppression of destructive fires the locality in which they occur has, or should have, a greater interest. The aim of the state is to extend to each fire district a measure of protection and to assemble local interest and assistance to complete the task of making the protection adequate. The state proposes to locate in each district one supervising fire warden, and to own, with the assistance of the federal government, all equipment used in fire detection and suppression. The district fire warden's job will be to study out the causes of the fires in his district, to assist and work with the town chairman, who are by law town fire wardens, to assemble the cooperative interest of local individuals and concerns, and to direct all other activities that will tend to prevent fires in the first place, and to suppress them if they start. As uncontrolled fires on forest and cut-over land decrease forest growth will increase, and it is significant that accomplishment along these lines is possible without interfering with any other kind of development in the district without the land being owned by the public and consequently being off the tax rolls and all at a reasonable expense. All parts of the state in which there is a risk from fires in extensive areas of forest or cut-over land should be protected. Such protection also promotes the welfare of game animals and birds, keeps the countryside green, and assists materially in the control of waters.

2. Coordinate and block up the existing areas of state-owned lands into units that can be effectively administered and protected.

The state now owns about 175,000 acres of land which were acquired by gift or purchase, specifically for forestry purposes. These lands are located mainly in Vilas and Oneida counties. They include many descriptions widely scattered. There is little occasion for additional purchases of land for state forests until the present very substantial acreage is adequately protected and administered. There is need for the blocking up and balancing up of these areas so that they will function as originally intended. Heretofore constitutional objections made it impossible to classify these lands as state forests, but with the approval of the forestry amendment to the constitution at the last election it is lawful to describe these areas as state forests and parks. Being located for the most part in the lake region these lands possess great value for recreational purposes, and the future will find them being used as forest parks. But there is need of a policy which will balance up these areas, for no county should be expected to contribute an inordinately large area of its land for public purposes. There should be a reasonable proportion determined upon so that the values that accrue to a county, either directly or indirectly, from the presence of an area held for public purposes within the limits of a county would compensate for the loss to the county, because of such lands being exempt from taxation. To bring about such an adjustment it is felt that in some instances it would be advisable to sell scattered descriptions of land on application, as market conditions warranted, and in accord with the statutes relating to land sales and thereby bring them back on the tax rolls and to retain the compact areas and to properly designate and develop these areas as forest parks. Determination as to proper sized areas to be held for public purposes could be made by consultation with well informed men and women in the state, and especially with local individuals, concerns, or organizations in the counties affected.

In addition to the lands mentioned in the preceding paragraph the state still possesses about an equal acreage of old school and educational trust fund lands. Considerable acreages of this class of property are still timbered. There is need for a system of suitably sized, suitably located game refuges in the northern counties. The state should own at least fifty game refuges of from two to five thousand acres each, in the thirty-five northern counties. These areas should be game refuges in every sense of the word, being selected specifically because of their value for such purposes, and they should be properly protected and patroled. They would also be small state forests. In addition suitably sized areas, both in length and width, of native forest should be acquired along the trunk line highways in the northern counties before this opportunity forever vanishes as the timber is cut. To affect these measures the lands mentioned in this paragraph as well as the scattered descriptions mentioned in the preceding paragraph should be used as a basis for exchanges. In many cases rather extensive acreages are located back from the main highways, and are of no immediate value to the public. If such descriptions were exchanged for timbered land along highways, on the basis of equal values, the public would come into possession of a property that would be immediately usable and simultaneously a piece of virgin forest would be preserved in a good location. All such exchanges, of course, would have to be approved by the land commission, and the integrity of the respective trust funds concerned remain unimpaired.

The point is, that herein lies the best opportunity to obtain stretches of native forests along the trunk line highways in the northern counties, which would in reality be little roadside parks, and it is quite apparent that this opportunity will exist for only a few years more. It also is apparent that a program of this kind is one that means a great deal to the whole state, and particularly to the northern counties, as would also any endeavor to establish a suitable system of real game refuges, and perhaps other large forest parks. The trunk line highways are permanently located, and should the relatively few stretches of virgin forest that now flank them in some of the northern counties be cut, and such is inevitable, the land on the highway then becomes just like the balance of the hundreds of miles of cut-over county, and has no value from a scenic or recreational standpoint. Such exchange, if authorized, should be made as opportunity affords, and only suitably sized, suitably located areas should be considered. It should be borne in mind in these contemplated exchanges that timbered or cut-over lands should be exchanged for timbered lands, and that the state should not exchange timbered lands for cut-over lands unless unusual circumstances presented themselves.

3. Private enterprise in forest replacement should be encouraged by proper legislation. To anyone who has given the question of forest replacement any study, it is early apparent that unless private capital undertakes a major part of the task that it must go largely unfinished. This is particularly true in a state like Wisconsin, which is relatively a flat land region and one in which practically all land has passed from public control. To again bring these large available areas into public control through state or federal ownership, a procedure of doubtful value at the best and especially if such has to be done by purchase, is almost out of the question. As a state undertaking it is practically impossible as the money for such purchases and for continued maintenance until such time as the new forest would be selfsupporting, for cut-over lands would be the only areas available in the beginning, would never be appropriated. What state forest areas that eventually may be acquired will be primarily demonstration areas and areas having a large recreational value and it is safe to say that even with the most optimistic estimates for acquisitions by the federal government for national forests in the state there will still remain a great area in small as well as large holdings available for private forests. Economic forces are steadily making it more and more possible for private undertakings in this field.

Assuming an adequate protection of land from fire, and such protection is entirely possible, we find the greatest remaining difficulty to private forestry in our methods of taxation. The taxation scheme is out of joint largely because of inflated values on the intrinsic productive capacity of the raw land itself. Land should really be assessed on its capacity to produce and not on its speculative value. Economic processes will force such a conclusion in the long run and assessed values will approach the true productive capacity of a tract of land. Land values based on actual productive qualities will not come suddenly, however, and in the meantime danger lies in the fact that the owner may abandon the land because he will not want to carry it indefinitely at a loss. We hear a lot nowadays of letting the land go back for delinquent taxes, in case of which the public gets the property whether they want it or not. It is quite probable that the public does not want lands of this character and the prudent thing to do would be, through proper legislation to forestall such a contingency and to make it possible for an individual or concern to hold the land and put it to a productive use as a forest property and to pay annual taxes even though such taxes were small. If land abandonment was to be carried to its logical conclusion it would certainly be a destructive process for many communities. It would be far better for all concerned to so arrange matters that individual or corporate enterprise could hold and develop the lands of the state and not have these lands revert to the public. Legislation encouraging the development of private enterprise in forestry is one of the

ways that very considerable areas of land in the state may be kept productive. Such a program is now reasonably feasible. It has been pointed out only recently that a return of from four to six per cent compounded can be figured on the planting of white pine and holding it over a rotation period of fifty years.

The primary steps in such a legislative program are—

- a. That land and timber should be taxed separately.
- b. That growing timber should be exempt from taxation until it reaches a merchantable size.
- c. That forest land should be assessed at its actual productive capacity.
- d. That a forest land contract, subject to the approval of the county board, should be entered into between the state and an individual or concern for a period of fifty years whereby the owner is guaranteed a fixed value on the forest land for taxation purposes and public assistance in the protection of such land from fire during the life of the contract. The owner in turn obligates himself to reforest the property by natural or artificial methods to the satisfaction of the state and to protect the land from fire and to cut the timber at maturity according to reasonable forestry regulations and pay a reasonable severance tax at the time of cutting, such severance tax to be divided on a fair basis between town, county and state government.

Other details will perhaps be needed in any program that will tend to encourage private enterprise in forest restoration, but the above outline suggest a base from which to work. It becomes more and more apparent that the day is near at hand when considerable activity in this field will be witnessed.

4. Continue forest investigations and studies. We are still lacking in fundamental knowledge of many forest problems. This is especially true of the growth of our desirable forest trees. There is available a sketchy lot of information on this subject but it is by no means as comprehensive nor profound as it should be. The Lakes States Forest Experiment Station—a federal institution—has recently been established at St. Paul and it has been the aim and should continue to be the aim of this state to assist and cooperate with this institution which is designed especially for forest research in an expanding way so that the basic knowledge of forests and forest conditions in Wisconsin may be ascertained.

STATE PARKS

The variety of life furnished by the quiet lake, the running stream, the depth of the forest, the study of wild things, the sight of unique rock formations or historic places, and the natural impulse on the part of all of us for a touch of the life under the open sky has prompted the establishments of parks and areas preserved in their natural condition. The desire for these things of the outdoors is

particularly pronounced in the city man or woman who, during the larger part of their lives live among congested conditions and in the high pitch of industrial and commercial activities. These impulses have started a very pronounced movement for the establishment of large recreational areas, which is evidenced by the setting aside of many large national and state parks in all parts of the country. The comparative ease of travel with the advent of the automobile has brought these areas into increasing prominence and has led to the temporary annual migration of millions of Americans, and the tourist is now on all roads and in every nook and corner of the land.

Wisconsin is well located and possesses the requisite advantages of climate and scenery, good roads and living accommodations to be the natural playground for the millions to the south of us. Our thousands of forested lakes and trout streams, the scenic and historic north and east shores washed by Lake Superior and Lake Michigan respectively, the bluffs of the Mississippi on our west, unexcelled hunting and fishing, a fall forest coloring unequalled anywhere, and a cool invigorating summer climate are some of the attractions offered to the tourist, whether of our own or an adjoining state. But more than that there have been, and will continue to be, attractive public areas set aside at convenient places in the state, where these tourists may find good water, sanitary living conditions, and the rough comforts that one would expect on an outing. tourist driving the Cadillac as well as the man driving a Ford will be provided for either at the regular hotels or resorts along the way or in his own tent, should he care to carry one. In this general plan the state parks will play an important part.

It is the opinion of the Conservation Commission that only the most outstanding, the most unique or most historic areas in the state should be included in the state park system, and that these areas should be selected with the utmost care. Embracing so many attractive places for park purposes, it is obvious that the state cannot own and take care of them all. Therefore, it is felt that a series of county and township parks should eventually supplement the state park system, and that these areas should be owned and managed by local bodies. While they will primarily serve local needs they should nevertheless be public in their nature, so as to provide for the tourist and furnish him a spot where he knows he will be welcome.

The state parks are continually growing in importance as patronage to them increases. This importance is bound to increase as the years go by. It becomes increasingly evident that sizable areas of natural wilderness, embracing lakes, rivers, forests and wild life, are necessary in a state destined to be thickly populated.

As early as 1890 the idea of large state park areas was taking shape. In that year the legislature set aside 50,000 acres of land in the northeastern lake region as the first state park. Unfortunately this area was not held intact but at a later date was placed on the market and sold. The first permanent acquisition of land for state

park purposes was made in 1901 when the state park at St. Croix Falls was started. Since then the present parks, a list of which follows, were gradually acquired either by gift or purchase. The patronage to these public areas is increasing from season to season and now numbers hundreds of thousands annually.

Name of Park	Area	Location
Devils Lake	1,400 acres	Baraboo, Sauk County
Peninsula	4,000 acres	Fish Creek, Door County
Interstate	580 acres	St. Croix Falls, Polk County
Nelson-Dewey	1,500 acres	Wyalusing, Grant County
Pattison	660 acres	Superior, Douglas County
Perrot	910 acres	Trempealeau, Trempealeau Co.
Cushing	8 acres	Delafield, Waukesha County
Tower Hill	60 acres	Iowa County
Old Belmont (First		•
State Capitol)	2 acres	Belmont, Lafayette County
Rib Hill	160 acres	Wausau, Marathon County

GAME DIVISION

From all indications the game birds and animals, both large and small, of the state, have done reasonably well during the past two years. The nesting seasons for the partridge and prairie chickens have not been good and these birds have suffered accordingly, but the supply of ducks on the inland waters seems to be on the increase. In spite of two heavy hunting seasons, the deer are holding their own but are not increasing. The winters covered by this report were open and very good for our game birds and animals and, all told, their general condition is fair.

During the biennium the warden division has been reorganized. Six warden districts have been established, each in charge of a district warden. On the average, eight regular wardens have been at work in each game district. This plan works out very well and will be continued. We are still, however, working with an inadequate warden force. Continual demands are made on us for wardens by the citizens of counties in which we have no regular warden located, but insufficient funds make it impossible to increase the force very much above fifty men.

A very pronounced and rapidly growing interest in better protection of all forms of outdoor life has developed during the past few years. There are now about 175 sportsmen's clubs in the state. Practically every city or town of any size has a game club or similar organization. These organizations have been of great value in supporting the commission and its work for better laws on fishing and hunting and particularly in taking care of local problems in connection with the work of the commission. They furnish an earnest, sincere and active support to the commission in all its work in the state.

FINANCIAL STATEMENT OF CONSERVATION COMMISSION

July 1, 1922, to June 30, 1923

OPERATION

Appropriations \$260,675,00 Unexpended balance 15,122.87 Refunds 100.00 Total disbursements Unexpended balance	\$271,259.19 4,638.68
\$275,897.87	\$275,897.87

REPAIRS AND MAINTENANCE

Appropriation Unexpended balance Total disbursements Unexpended balance	1111	 *	 	• • •	 	3,283.49	\$25,800.01 83.48
						\$25,883.49	\$25,883.49

PROPERTY AND IMPROVEMENTS

Appropriation Unexpended balance		 	 *							\$19,600.00 1,489.60	
Total disbursements Unexpended balance	4.4	 	 	 ٠.		 	 	 			\$21,052.74 36.86
									,	\$21,089.60	\$21,089.60

CLASSIFICATION OF DISBURSEMENTS

Administration	\$37.688.77
Forestry	31,496.33
Parks	28,986.40
Wardens,	130,645.97
Fisheries	89,294.47
The second secon	-

\$318,111.94

ADMINISTRATION

Salaries	\$24,725.33
Supplies	2,256.04
Printing	2,269.66
Postage	1,435.30
Telephone and telegraph	772.92
Express, freight and drayage	382.51
Traveling expenses	2,681.51
State car expenses	597.64
Advertising	53.36
Reporting convention	36.50
Property	2,367.00
Chapter No. 153, Laws of 1923	111.00

\$37,688.77

FORESTRY AND FIRE PROTECTION DIVISION

Salaries and	labor			 	\$13,900.17
Supplies	none			 ********	4,539.70 5,305.04
Employees' ex Repairs					4,660.15
Property and	imp	roven	ents	 	2,517.60
Insurance				 *******	573.67

\$31,496.33

PARK DIVISION

Salaries and labor Supplies Repairs Property and improvements Employees' expenses Telephone Insurance	\$9,509.60 3,875.92 8,665.89 4,558.93 1,498.55 40.75 836.76	\$28,986.40
PARK DIVISION		
Peninsula Devil's Lake Inter-State Nelson-Dewey Pattison Brule Jenkin Lloyd Jones	\$7,566.98 13,493.81 2,518.81 2,098.08 2,380.95 738.07 189.70	\$28,986.40
WARDEN DIVISION		
Railroad fares Railroad fares Hotel expenses Livery expense Auto mileage Other expenses State car expenses Auto supplies Gas and oil Provisions and supplies Launch hire Telegraph and telephone Game farm Property and improvement Boat supplies Boat repairs Advertising Insurance	\$79,221.00 3,263.37 17,218.83 13,665.25 2,328.81 8,157.25 1,416.91 2,405.46 65.82 345.15 283,86 233.90 131.36 441.38 276.69 144.86	\$130,645.97
FISHERIES DIVISION	4	
Madison Hatchery Bayfield Hatchery Oshkosh Hatchery Minocqua Hatchery Delafield Hatchery Wild Rose Hatchery Sturgeon Bay Hatchery Sheboygan Hatchery Spooner Hatchery Eagle River Hatchery St. Croix Falls Hatchery Tenney Park Hatchery Distribution of fish State Fair exhibit Collecting lake trout eggs Collecting pickerel eggs Collecting bass eggs Collecting fish at Neenah dam	\$7,971,95 12,872,67 4,112,77 7,386,54 3,162,91 4,060,33 593,54 369,26 23,574,39 72,17 10,572,17 10,572,19 254,19 4,205,33 435,12 805,66	

\$89,294.47

FISHERIES DIVISION

FISHERIES DIVISION	•	
Salaries and labor	\$34,787.95	•
Fish food	7,478.98 12,473.97	
Repairs Supplies	12.577.78	
Property and improvement	11,375.31	
Telephone	57R 48	
Express, freight and drayage	1,722.00	
Insurance Employees' expenses	1,722.66 1,256.52 7,099.89	
-		\$89,294.47
=		
EMERGENCY FIRE WAR	D ENS	
Disbursements		\$286.00
•		
THE CONSERVATIONS	ST	
Unexpended balance	\$307.02 205.55	
Receipts for year	200.00	\$512.57
-	A	
-	\$512.57	\$512.57
-	•	
FIRE LOSS—STURGEON BAY I	HATCHERY	
	•	
Insurance	\$19.40	410 10
Disbursements		\$19.40
	\$19.40	\$19.40
=		
	`	
FIRE PREVENTION AND CONTROL	(WEEKS).	A W)
Title They million million	(WALLED D	,
Balance July 1, 1922	\$1,608.68	
Reimbursement by U. S. Government	13,864.62 2.80	
Refunds	2.80	\$11,982.77
Balance		8,548.88
-	\$15,476.10	\$15,476.10
=	\$10, 110.10	\$10,710.10
•		
LOCATION OF NEW FISH HA	TCHERY	
Boomilon of New Year In	102123112	
Unexpended balance	\$1,800.03	
Disbursements		61 800 08
Balance		\$1,800.03
	\$1,800.03	\$1,800.08
FOREST NURSERY		
FUREST NURSERI		
Unexpended balance	\$1.048.85	•
Appropriation	\$1,048.85 4,000.00	
Refunds	18.88	\$1 \$4E A0
Disbursements		\$1,845.08 8,217.60
	\$5 000 00	
=	\$5,062.68	\$5,062.68

GOVERNMENT	REFORESTATION	FUND
------------	---------------	------

Unexpended balance Receipts for year Refund Disbursements Unexpended balance	\$2,214.36 3,117.96 2,25 \$5,334.57	\$2,150.65 3,183.92 \$5,334.57
PARK PURCHASE FUN	D	
Unexpended balance Receipts for the year Refund Disbursements Unexpended balance	\$5,576.57 6,604.28 13.10	\$23.10 12,170.85
	\$12,293.95	\$12,193.95
AUTOMOBILES		
Appropriation (Conservation Fund)	\$1,066.24	\$1,066.24
	\$1,066.24	\$1,066.24
EXTRA WARDENS DURING DEE	ER SEASON	
Appropriation (Conservation Fund) Disbursements Unexpended balance	\$2,000.00	\$1,936.96 63.04
	\$2,000.00	\$2,000.00

TOTAL RECEIPTS

from

July 1, 1922 to June 30, 1923

Nonresident fishing licenses Great Lakes fishing licenses Mississippi River fishing licenses Fish dealers' licenses Rough fish Resident hunting licenses Nonresident hunting licenses Duplicate licenses Settlers' licenses Confiscations Warden's fees Trapping licenses Guide licenses Guide licenses Clamming licenses Clamming licenses Park leases and concessions Beaver and otter trapping licenses Deer tags Island leases and nursery stock Miscellaneous Fire control (Weeks Law)	925.063 163.065.14 17.775.06 450.00 6,401.10 1,483.53 37,089.48 1,659.20 435.00 1,540.00 6,617.38 38.00 14.859.19 2,552.92 1,561.89
	\$372,478.48

FINES 1MPOSED

County	1922-	1923	Country	19	22-1923
County Number Amount County	Number	Amount			
Adams	5	\$250,00	Marquette	3	150.0
Ashland	10	500.00	Milwaukee	6	515.0
Barron	8	400.00	Monroe	6	275.0
Bayfield	18	885.00	Oconto	13	705.0
Brown	6	350.00	Opoide	21	1,125.0
Buffalo	1	50.00	Oneida	41	250.0
Summett	1	50.00	Outagamie	i	50.0
Burnett	12		Oznukee		50.0
hippewa		600.00	Pierce	1	
Columbia	8	400.00	Polk	17	900.0
Crawford	6	300.00	Portage	13	955.0
Dane	7	800.00	Price	2	105.0
Oodge	7	350.00	Racine	3	150.0
Door	7 2 12	100.00	Richland	1	50.0
Douglas	12	710.00	Rock	5	325.0
Ounn	2	100.00	Rusk	11	550.0
lorence	1	100.00	St. Croix	5	250.0
ond du Lac	20	1,000.00	Sauk	6	310.0
orest	37	2,045.00	Sawyer	24	1,245.0
rant	13	695.00	Shawano	44	2,575.0
reen	2	100.00	Sheboygan	5	250.0
reen Lake	3	150.00	Taylor	11	550.0
owa	1	50.00	Vilas	25	1.280.0
ron	17	905.00	Walworth	29	1,500.0
ackson	3	150.00	Washburn	7	470.0
efferson		350.00	Washington	15	710.0
uneau	8 2	100.00	Washington	20	1,050.0
enosha	14	700.00	Waukesha	20	1,030.0
a Crosse	3	165.00	Waupaca	4	290.0
a Crosse	1		Waushara	19	955.0
afayette		50.00	Winnebago		
anglade	60	3,250.00	Wood	2	100.0
incoln	6	300.00		000	anc 00= 0
Ianitowoc	16	810.00		666	\$36,095.0
farathon	5	385.00	1		
farinette	6	275.00			

ARRESTS MADE-FINES IMPOSED

1922-1923

Violations hunting Violations fishing Violations trapping Miscellaneous	Arrests 422 254 72 45
Fines imposed	793 666
WARDEN FEES .	\$1,483.53
CONFISCATIONS	
1922-1923	
Number 644	Sold for \$6,401.10

DEER KILLED DURING SEASON OF 1923

County	Number	Pounds
Ashland	129	21,543
Barron	2	322
Bayfield	263	43,132
Burnett	15	1,650
Chippewa	18	1,908
Clark	23	3,726
Douglas	180	29,880
Eau Claire	14	2,422
lorence	46	7,360
orest	67	11,859
ron	90	14,850
anglade	32	5,632
Lincoln	32	5,344
Marinette	33	5,511
Deonto	11	1,771
Oneida	86	14,964
Pierce	3	438
Polk	5	855
Price.	205	33,000
Rusk	116	18,328
St. Croix	1	150
Sawyer	231	56,443
Taylor	103	16,99
Vilas	97	15,90
Washburn	29	4,61
Wood	12	1,86
Miscellaneous	8	1,45
	1,851	321,92

FURS TAKEN UNDER TRAPPING LICENSES

For the year ending June 30, 1923

Animal	Number	Value
Muskrat	49,728 14,787 1,146 38,590 3,513 845 507 63 19	\$71,788.81 80,952.15 4,810.04 91,314.62 1,701.33 7,248.48 4,691.49 86.35 191.65 71.03
	109,241	\$262,855.95

FINANCIAL STATEMENT OF THE CONSERVATION COMMISSION

July 1, 1923 to June 30, 1924

OPERATION

Appropriation	\$270,736.91	
Unexpended balance	4,638.68	
Refunds	216.70	
Total disbursements		\$261,173.01
Transferred to repairs		152.33
Onexpended balance		14,266.95
	\$275,592.29	\$275,592.29
	\$210,002.20	4210,000.20
REPAIRS AND MAINTEN	NANCE	
Appropriation	\$28,065.00	
Transferred from Operation	152.33	
Unexpended balance	83.48	907-0-0 70
Total disbursements		\$27,952.73
Unexpended balance		340.00
	\$28,300.81	\$28,300.81
	420,000.02	
PROPERTY AND IMPROVE	MENTS	
Appropriation	\$27,665.00	
Unexpended balance	2.60	
Total disbursements		\$27,525.50
Unexpended balance		142.10
	\$27,667.60	\$27,667.60
	\$21,001.00	\$21,001.00
The state of the s	1000	
OI ASSERTANTION OF DISPUTE	GENERALING	
CLASSIFICATION OF DISBUR	SEMENTS	
Administration	\$42,667.48	
Forestry	28,752.63	
Parks	24,254.64	
Wardens	135,665.14	
Fisheries	135,665.14 85,311.35	
The second secon		4010 051 01
		\$316,651.24
The second restaurable		
ADMINISTRATION		
Salaries	\$23,393.45 6,075.21 6,163.03 1,439.87 867.56	
Supplies	6,075.21	
Printing	6,163.03	
Postage	907 50	
Express, freight and drayage	138.68	
Traveling expenses	2 922 10	
Traveling expenses	1,185.18 471.75	
Property	471.75	
Advertising	10.65	
		210 000 10
		\$42,667.48
THE PERSON NAMED IN COLUMN 1		
FORESTRY		
	V-120474	
Salaries and labor	\$9,534.77	
Supplies	4.617.28 4.623.83	
Employees' expenses	4,623.83	
Repairs	0.040.41	
Improvements Advertising	2,639.35 80.25	
Printing	4.76	
Insurance	303.98	
		-
		\$28,752.63

PARK DIVISION

Peninsula Park	\$5,167.36
Devils Lake Park	13,963.58
Inter-State Park	966.50
Nelson-Dewey Park	1,035.99
Pattison Park	3,016.57
Brule	96.00
Tower Hill	36.00

\$24,254.64

PARK DIVISION

Salaries and labor	\$7,607.69
Supplies	2,416.33
Improvements	7.357.98 5.804.25
Employees' expenses	389.82
Telephone	24.00 654.57
Insurance	001,01

\$24,254.64

WARDEN DIVISION

Salaries	\$89.016.13
Railroad fares	2.464.14
Hotel expenses	14,760,72
Livery expense	383.72
Auto mileage	11,389,95
Other expenses	2,353.27
State car expense	6.376.53
Auto supplies .,	793.11
Gasoline and oil	294.67
Provisions and supplies	1,705.17
Telephone	314.49
Boat repairs	431.91
Improvements	4,883.64
Repairs	210.18
Miscellaneous expense	79.19
Insurance	208.32

\$135,665.14

FISHERIES DIVISION

Madison Hatchery	\$16,953,98
Bayfield Hatchery	10,300.61
Oshkosh Hatchery	83.37
Tenney Park Hatchery	51,69
Minocqua Hatchery	3,122,36
Delafield Hatchery	3,885.81
Wild Rose Hatchery	7,085.47
Sturgeon Bay Hatchery	5,630.82
Sheboygan Hatchery	2,615.70
Spooner Hatchery	305,82
Eagle River Hatchery	149.83
Westfield Hatchery	470.41
St. Croix Falls Hatchery	18,248.77
Distribution of fish	11,174.20
State Fair Exhibit	30.82
Collecting bass eggs	31.90
Collecting pike eggs	4,434.74
Collecting pickerel eggs	100.00
Collecting white bass eggs	83.69 551.36
Collecting fish Neenah Dam	991.30

\$85,311.35

FISHERIES DIVISION

Salaries and labor Fish food Supplies Repairs Improvements Telephone Express, freight and drayage Employees' expenses Insurance	31,438.87 6,883.52 7,846.01 14,278.68 13,726.51 440.71 1,513.15 6,377.75 1,203.62
The second secon	\$85,311.35
EMERGENCY FIRE WARDE	
FIRE PREVENTION AND CONTROL (WEEKS LAW)
Balance July 1, 1923 Reimbursement by U. S. Government Refunds Disbursements Balance	\$3,543.33 12,255.60 22.05 \$9,376.25 6,444.73

LOCATION OF NEW FISH HATCHERY

Unexpended balance		\$1,800.03
Unexpended balance	***************************************	\$1,800.03

FOREST NURSERY

Unexpended balance \$3.21 Appropriation 4,000 Disbursements Unexpended balance	
\$7,21	7.60 \$7,217.60

GOVERNMENT REFORESTATION FUND

Unexpended balance \$3,183.92 Receipts for year 2,301.96 Disbursements Unexpended balance	\$2,782.63 2,753.25
\$5,485.88	\$5,485.88

PARK PURCHASE FUND

Unexpended balance	9,115.65	
Disbursements Unexpended balance		\$21,286.50
	\$21,286.50	\$21,286.50

\$15,820.98

\$15,820.98

DEVILS LAKE PARK BOAT FUND

Receipts for the year	\$1,321.00	\$567.52 753.48
	\$1,321.00	\$1,321.00
TWO NEW FISH HATCHE	RIES	
Appropriation Disbursements Unexpended balance	\$5,000.00	\$234.53 4,765.47
	\$5,000.00	\$5,000.00
PARK ROADS FUND	\$25,000.00	
Appropriation Disbursements Unexpended balance	\$25,000.00	\$ -845.28 24,154.72
	\$25,000.00	\$25,000.00
FIRE LOSS—CARROLL LAKE	CABIN	
Insurance	\$1,170.00	\$1,170.00
	\$1,170.00	\$1,170.00

TOTAL RECEIPTS

from

July 1, 1923 to June 30, 1924.

Nonresident fishing licenses	\$136,615,31
Great Lakes fishing licenses	5,642.75
Mississippi River fishing	
mississippi giver using	3,004.00
Fish dealer's licenses	
Rough fish	76,809.76
Resident hunting licenses	159,924.53
Nonresident hunting licenses	
Duplicate licenses	
Catalana licenses	
Settler's licenses	
Confiscations	
Warden's fees	971.81
Trapping licenses	24,848.75
Set line licenses	1,223.00
Guide licenses	
Clamming licenses	
Park leases and concessions	
Deer tags	
Trap tags	
Island leases and nursery stock	
Fire control (Weeks Law)	12,277.65
Boat receipts-Devil's Lake launch	1,321.00
Miscellaneous	
middling the state of the state	0,000.01

\$515,703.94

FINES IMPOSED

- A	192	3-1924	1 0	1923-	1924
County	Number	Amount	County	Number	Amount
			Monroe	5	250.00
Barron	1-	201001000000	Oconto	12	450.00
Bayfield	5	270.00	Oneida	28	800.0
Brown	7	200.00	Outagamie	3	150.0
Buffalo	1	50.00	Pepin	1	50.0
Burnett	6	300.00	Polk	5	250.0
Calumet	6 6 3	250.00	Portage	8	310.0
Chippewa	3	150.00	Price	14	625.0
Clark.	4	360,00	Rock.	3	100.0
Columbia	4	200.00	Rusk	6	150.0
Crawford	4 3	150,00	St. Croix	13	300.0
Dane	5	210.00	Sauk	3	200.0
Dodge	4	100.00	Sawyer	3	30.0
Door	5	100.00	Shawano	8	500.0
Douglas	13	590.00	Sheboygan	6	300.0
Dunn		50.00	Taylor	11	585.0
Florence	9	200.00	Vernon	i	000.0
ond du Lac	3	100.00	Vilas	5	215.0
orest	25	850.00	Walworth	13	1,200.0
Frant		100.00	Washburn	7	325.0
Green	2 2	100.00	Waukesha	19	650.0
Freen Lake	î	50.00		7	325.0
ron	3	200.00	Waupaca	3	1 50.0
efferson	21	1,000.00		17	590.0
uneau		50.00	Winnebago Wood	5	250.0
uneau	1	200.00	Pine County	0	200.0
Cenosha	4			11	765.0
a Crosse	4	150.00	Minn	11	100.0
anglade	25	1,875.00		526	\$20,760.0
incoln		1,165.00	11	020	\$20,100.0
Manitowoc	4	150.00	1	-	
Marathon	21	670.00			
Marinette	66	1,065.00			
Milwaukee	4	415.00			

ARRESTS MADE

1923-1924

Violations		 	 	 		 	 	 		 ٠.				٠.		v	268
Violations		 	 	 		 		 		 							144
Violations																	
Miscellane	ous	 	 	 		 		 		 		 	٠.			,	28
																1	526
																	D26

WARDENS FEES

Time	1000 1004	**** BT
FOF	1023-1024	 \$971.81

CONFISCATIONS

1923-1924

Number	Sold for
269	\$1,861.40

REPORT OF LOCOMOTIVE INSPECTIONS

Gentlemen:-

I herewith submit to you my report of Locomotives and Rights of Way inspected during 1923.

The following tables show the number of locomotives inspected during the year 1923 and their classification as to fitness for service:

Good	249
Fair Bad	28
In for repairs at round-houseOut of service	10
Out of service	*

Total No. Inspected _____ 298

Classified Defects

- 12 Defective ash pan
- 19 Defective front end screen or smoke box
- 4 Engines inspected and found with no spark arrester on stack
- 6 Ash pans not properly screened in for service
- 4 No. of hot engines where ash pan only was inspected
- 41 Engines or approximately 14% of the total number of engines inspected were found to be defective.

The following tables show the rating of the different main line railroads:

Name of R. R.	Total	Good	Fair	Bad	In for repairs at Round House
C. St. P. & O. Ry. C. M. & St. P. Ry. Soo Line C. & N. W. Ry. G. B. & Western. Wis. Mich. R. Co. Northern Pacific.	40 22 64 62 18 3	37 21 60 58 16 2	2 1 2 2 2 2	1	2 2
Totals	210	194	10	1	- 5

Classified Defects

Railway	Defective Ash Pans	Defective Front End Screens	No. of Hot Engines Inspected
C. St. P. & O. R. C. M. & St. P. R. Soo Line Ry.	1 1	2	
G. & N. W. G. B. & W. Wis. Mich.	2 2 1	i	4
Northern Pacific	1		
Totals	8	4	4

Twelve or approximately 6% of the total number of Main Line engines inspected were defective in one way or another.

The following tables show the rating of the different logging company engines:

Location	Name of Lumber Company	Total	G.	F.	B.	R.	0. S.
Nekoosa &							
Port Edwards	Nekoosa Edwards Paper Co	2 3	1	1			
Fairchild	Central Wis. Ry. Co.		3				
Stanley	S. M. & P. Ry. Co.	1					1
Owen	J. S. Owen Lbr. Co.	1 3	1				*****
Merrill	Kinzel Lbr. Co.	4	2	1			
Drummond	Rust Owen Lbr. Co.	4	4				
Bayfield Ironwood M.	Wachsmuth Lbr. Co. Scott & Howe Lbr. Co.	i		1	3		
Winchester	Turtle Lake Lbr. Co.	1	1	1			
Winegar	Vilas County Lbr. Co.	2 2	_	i	<u>i</u> -		
Pearson	Langlade Lbr. Co.	î	1				
Carter	O'Neva Lbr. Co.	î		1			
Townsend	Holt Lbr. Co.	2	2	7.0			
White Lake	Yawkey Bissell Lbr. Co.	3	3	-		1011	
Tipler	Tipler Lbr. Co.		i	1		200	
Tipler	Sever Anderson Lbr. Co.	2	î		1		
Blackwell	Flanner Steger Lbr. Co.	2 2 2	î	100			
Pembine	Sawyer Goodman Lbr. Co	2	î	1			
Goodman	Goodman Lbr. Co.	3	3				
Stone Lake	Lloyd McAlpine Lbr. Co	1	1				
Star Lake	Stange Lbr. Co.	3	2	1			
Rhinelander	Thunder Lake Lbr. Co.	3	2	1	_		
Hiles	Chas, Fish Lbr, Co.	1		1			
Laona	Connor Land & Lbr. Co	2	2				
Phelps	Hackley Phelps & Bonnell	1	1			1	
Tripoli	Bissell Lbr. Co.	2	2				
Ladysmith	Fountain Campbell Lbr. Co.	.3	3				
Nashville	Underwood Veneer Co	1	1				
Glidden	Mellen Lbr. Co.	1	1				
Morse	Kneeland McLurg Lbr. Co	1	1				
Foster	Mellen Lbr. Co.	1		1			
Mellen	Foster Latimer Lbr. Co	2	1				1
Park Falls	Flambeau Paper Co	2		2			
Park Falls	Park Falls Lbr. Co	5	1	2		2	
Park Falls	Roddis Veneer Co.	3 3	1				2
Winter	J. H. Kaiser Lbr. Co.	3	1	2			
Kennedy Lugerville	New Dells Lbr. Co.	2	i			1	
Phillips	West Lbr. Co Kneeland McLurg Lbr. Co	3	2	1		1	*****
Westboro	Holland Walsh Logging Co	1	1	100			
Rib Lake	Rib Lake Lbr. Co.	2	2		1000		
Medford	Medford Lbr. Co.	2	2		100		
Soperton	Menominee Bay Shore Co.	î	1				
poper con	Menominee Day Edore Co.	4	-			7555	
	Totals	88	55	18	6	5	4
		-	-	1		100	

Key G. Good F. Fair B. Bad R. In for repairs at Round house O. S. Out of service—not running



Virgin White Pine in Wisconsin

red by Google

Location	Name of Lumber Co.	D A P	D F E	D S A	A P S	Engines with no spark arrest
Nekoosa &					8	500
t. Edwards	Nekoosa Edwards Paper Co.					
Merrill	Kinzel Lbr. Co.		1			
Bayfield	Wachsmuth Lbr. Co.		2		2	3
Winchester	Turtle Lake Lbr. Co.		1		2	
Winegar	Vilas County Lbr. Co.		2			
arter	O'Neva Lbr. Co.			1		
ipler	Tipler Lbr. Co.	1				
Tipler	Sever Anderson Lbr. Co		1			
embine	Sawyer Goodman Lbr. Co.				1	1
tar Lake	Stange Lbr. Co.	****	1			
thinelander	Thunder Lake Lbr. Co.		4	-		
Hiles	Chas, Fish Lbr, Co.		1			
oster	Mellen Lbr. Co.		4			
ark Falls	Flambeau Paper Co.		1	2		
ark Falls	Park Falls Lbr. Co.		1		i	
Vinter	J. H. Kaiser Lbr, Co.		- 1			
hillips	Kneeland-McLurg Co.		1			
	Totals	4	15	4	6	4

Key D. A. P. — Defective Ash Pans D. F. E. — Defective Front End Screen or Smoke Box D. S. A. — Defective Spark Arrester or Hood A. P. S. — Ash Pans not properly screened.

CLASSIFIED DEFECTIVENESS

Four or approximately 5% of the logging company engines had defective ash pans.

Fifteen or approximately 17% of the logging company engines had defective front ends.

Four or approximately 5% of the logging company engines had defective spark arresters.

Six or approximately 7% of the logging company engines had ash pans not properly screened.

Four or approximately 5% of the logging company engines were classed defective because they did not have spark arresters on while in service.

Twenty-four or approximately 27% of all logging company engines were defective in one way or another.

FRONT ENDS

294 of the 298 engines inspected. The front ends were opened. The balance or 4 were hot and ash pans only were inspected.

ASH PANS

Eight defective ash pans were found on main line locomotives or 3.8% of all main line engines had defective ash pans. Four defective ash pans were found on logging company engines or 4.6% of all logging company engines had defective ash pans.

It can be seen from the above percentages that the main line railroads are more particular with their ash pans than the logging companies operating in Wisconsin. The defects in general found on main line locomotives were not as great as those found on the logging company locomotives. The daily inspection given all main line locomotives will account for the smaller defects. It would be well for the logging companies operating locomotives in a timbered region to instruct their engine crews to be more cautious with ash pan inspections. Main line companies have a well organized crew for all kinds of repair work, each kind of repair work being classified. It would not be practical for the logging companies to have such an extensive organization and for that reason the engine crews, who usually do all repair work on the engines they operate, should repair ash pans before they become badly defective.

FRONT ENDS

Any defect in the front end screen or smoke box in general is classified under front ends.

Four defective ends or approximately 2% of all main line locomotives had defective front ends. Fifteen defective ends or approximately 17% of all the logging locomotives inspected had defective front ends.

A great many logging companies are not as careful with the condition of the front end screens in their operating locomotives as they should be and the reason for this condition can be summed up as follows: Logging locomotive front ends are inspected (as a rule) only when wash-outs are made and a great many times not that often. It does not require much time to make a front end inspection and it is the most important fire prevention inspection that can be made. For that reason daily inspections, if possible, should be made especially during dangerous dry weather periods. In a great many cases front end inspections are months apart and for this reason many defective front ends are found by the locomotive inspector. Main line companies have daily inspections made of front ends and keep a front inspection book for this purpose which is open for inspection at any time.

GENERAL REMARKS

In every case where suggestions for improvements have been made by the locomotive inspector they have been received with all due consideration on the part of logging and main line mechanics. When repairs have been ordered by the locomotive inspector they have been made as soon as possible, in most every instance, although in some cases the repairs were not made as soon as possible.

> F. G. KILP, State Locomotive Inspector.

SUMMARY OF FOREST, MARSH AND SWAMP FIRES DURING 1922 AS REPORTED BY 361 TOWN CHAIR-MEN OUT OF 609 IN NORTHERN COUNTIES

Ninety-four (94) fires were reported as having burned over 16,579 acres. Twenty-eight (28) or 30% were reported with estimated losses as follows:

Damage to Timber Land Damage to Reproduction Damage to Stacked Hay, Marsh, and Hay Land Damage to Barn Tractor and House	\$5,375.00 6,950.00 1,340.00 2,224.00
	\$15,839.00

Sixty-six (66) fires or 70% were reported with losses unestimated. 583 men fought at 61 fires or 65% of the fires that burned. 35% of the fires were allowed to burn with no effort being made to stop them.

The cost to towns to fight fires amounted to \$1,370.18, bills being created at 47% of the fires. At 17 fires or 18% services were volunteered by the people living in the vicinity of where the fires occurred. Sixty-seven (67) or 71.5 started from unknown sources. 28.5% started from known sources.

Causes of Fires	Percentage of Fires by Months
Railroads 5 fires 5.5% Land Clearing 11 " 11.5% Campers 8 " 8.5% Smokers 1 " 1 % Incendiary 1 " 1 % Miscellaneous 1 " 1 % Unknown 67 " 71.5%	April 4 fires 4 % May 11 " 11.5% June 5 " 5.55% July 4 " 4 % Aug. 13 " 14 % Sept. 18 " 19 % Oct. 22 " 23.5% Nov 1 " 1 " 1 No report 16 " 17.5%

	No. of Fires	Property Loss	Costs to Towns	No. of Men Employed to Fight Fires	Acres Burned
AdamsBayfieldBurnettChippewa	7 7 2 2	\$1,005.00 550.00	\$310.00 119.36 27.55	78 32 12	1,094 284 86 147
Clark Douglas Eau Claire	7 7 2 2 3 3 2 13	1,500.00	11.25 30.00 3.00	18 5 8	430 1,060 45 940
luneau Lincoln Larathon Lincol	10 3 1	3,050.00 1,885.00	16.30 236.14 85.00	32 195 15 3	4,701 2,811 200 200
Marinette Monroe Oconto Oneida	3 2 1 4	2,024.00	30.00 31.00 3.00 50.86	226 4 1 21	1,967 11 10 108
Portage Price Rusk	11 1 1 2	2,050.00 25.00	161.07 9.00	52 6	396 2 80 300
Shawano Paylor Wood	2 1 6 4 1	75.00 2,700.00	33.00 114.00 8.20 7.20	11 40 6 6	30 542 1,095 40
Totals	94	\$15,839.00	\$1,870.18	588	16,579

Four fires burned in the above named counties and no estimate of the number of acres burned was reported to the Wisconsin Conservation Commission.

Percentage of Fires in Each County During the Fire Season of 1922

Adams Jackson 4% Portage	11.5%
Adams 70 Juneau 10% Price .	1%
Daynett 3% Rusk .	1%
Builder Marathon 1% Sawyer	2%
Marinette 3% Shawan	0 1%
Clark 2cf Monroe 2% Taylor	6%
Douglas 2g Ocento 1% Wood .	4%
Eau Claire 2% Oconto 1% Wood .	1%



One of the New Flowing Wells at the Bayfield Fish Hatchery

SUMMARY OF FOREST, FIELD AND MARSH FIRES DURING 1923, AS REPORTED BY 470 TOWN CHAIR-MEN OUT OF 623 IN NORTHERN COUNTIES

There were 562 fires reported as having burned over 528,299 acres. 174 or 30% were reported with estimated losses as follows:

Damage to 24,261 acres of timberProperty losses to the extent of	_\$136,478.00 _ 71,060.00
Total loss reported	_\$207.538.00

No estimates were made as to the amount and value of reproduction burned over on the cut-over lands. 388, or 70% of the fires were reported with losses unestimated. 5,490 men fought at 418 or 74% of the fires that burned. 144 fires or 26% were allowed to run with no effort being made to stop them. The cost to the towns to fight the 388 fires above mentioned amounted to \$18,420.50. At 200 fires or 35% services were volunteered by the people living in the vicinity and the towns incurred no expense. At 218 fires or 39% the towns were compelled to hire fire fighters and bills had to be paid for their services. 333 or 59% of the fires started from unknown sources. 229 or 41% started from known sources.

Causes of Fires	Percentage of fires by months
Unknown	April 10 fires 2 % May 141 " 25 % June 32 " 5½ % July 19 " 3 % August 32 " 5½ % September 40 " 7 % October 227 " 41 % November 40 " 7 % December 4 " 1 % No date" 17 " 3 %
motorists	December 4 " 1 % No date* 17 " 3 %

* No date means fires that were reported by town chairmen but the month in which they occurred was not reported.

The main line railroads caused 43 or 7½% of the fires that burned. These 43 fires burned over 12,046 acres or an average of 280 acres.

The logging railroads were responsible for five of the fires that burned, or approximately 1% of the fires that occurred, and the average acreage for each fire was 1,888. The five logging railroad fires burned over a total of 9,440 acres.

Settlers clearing land were responsible for 111 fires or 20% of the fires that burned. 86 of these fires were reported with estimated acreage burned over which amounted to 87,681. Each fire averaged 1,020 acres.

Four barns, four sheds, fourteen houses, one portable mill, one set of camps, and one schoolhouse were among the property losses reported, which amounted to \$71,060.00.

COUNTY SUMMARY

Name of County	No. of Fires	Property Loss Including Timber Loss	Costs to Towns	No. of Men Employed to Fight Fires	Acres Burned Over in Each County
Adams	15	\$6,695.00	\$688.47	218	4.071
Ashland	12	9,690,00	784.55	278	11,136
Barron	6	75.00	15.10	29	1,020
Bayfield	42	12,315.00	1,728.86	495	63,138
Burnett	41	7,565,00	940.15	260	10,353
Clark	8	50.00			2,180
Douglas	46	7,813.00	3,180.00	662	58,394
Dunn	3	1,800.00			210
Eau Claire	1	50.00			80
Florence	8	500.00	313.00	54	6,720
Forest	41	54,350.00	1.043.85	580	54,790
ron	17	4,500.00	1,444.25	251	7,180
lackson	12	300.00	31.50	13	8,464
uneau	19	4,130,00	332.67	178	14,605
anglade	7	4,100.00	98.60	28	2,526
incoln	12	15,500.00	211.00	20	9,350
Marathon	26	1,375.00	157.55	114	5,270
Marinette	16	1,000.00	40.00	71	14,920
Monroe	8	280.00	42.90	123	2,415
Deonto	8	270.00	249.02	59	1,685
)neida	17	3,230.00	379.25	81	2,670
ortage	18	2,495.00	326.55	115	1,636
rice	35	20,114.00	2,210.62	500	30,667
Rusk	16	14,550.00	325.20	243	65,925
awyer	22	160.00	1,442.18	490	80,010
hawano	10	3,200.00	426.71	127	3,918
aylor	30	13,645.00	895.80	118	19,885
ilas	20	5,700.00	146.50	128	11,709
Vashburn	29	11,296.00	553.44	145	11,176
Vaushara	1	4,000.00	165.55	27	800
Vood	16	890.00	247.23	83	12,396
Totals	562	\$207,538.00	\$18,420.50	* 5,490	528,299

Fifteen fires burned in the above named counties and no estimate of the number of acres burned over was reported.

Percentage of Fires in Each County During the Fire Season of 1923

Adams 2	% Ashland 2	% Barron 1%
Bayfield 7	% Burnett 7	% Clark 1%
Douglas 8		
Forest 7	% Iron 21	% Jackson 2%
Juneau 4		% Lincoln 2%
Marinette 3	% Marathon 5	% Monroe 1%
Oconto 1		% Portage 3%
Price 7	% Rusk 3	
Shawano 2		
Washburn 5		

TREES SHIPPED FROM STATE NURSERY IN 1923

	For State Plantings	For Private Plantings
White Pine Norway Pine Scotch Pine Jack Pine White Spruce	20,000 21,500 122,800 2,500	40,610 41,260 38,146 7,085 24,263
Norway Spruce. White Elm. Miscellaneous.	10,000	23,811
	176,800	177,260
Grand Total		354,060

TREES SHIPPED FROM STATE NURSERY IN 1924

	For State Plantings	For Private Plantings
White Pine Scotch Pine Norway Pine Jack Pine White Spruce Norway Spruce Arbor Vitae	7,500 42,450 22,500 90,550	51,080 83,800 26,730 14,910 49,415 19,280 1,600
Grand Total	168,000	246,815 409,815
DISTRIBUTION BY SPECIES, 1	923	
Brook trout fingerling No. 1 Brook trout fingerling No. 2 Brook trout fingerling No. 3 Brook trout fingerling No. 4 Brook trout yearling Total brook trout	609,900 ,738,100 298,000 50,250 18,000	2,714,250
Brown trout fingerling No. 1	,092,000 628,000	1,720,000
Total rainbow trout	,451,850 179,110 27,500	2,658,460
Pickerel fry 1 Pickerel fingerling No. 1 Pickerel fingerling No. 4 Total pickerel	,832,800 20,000 316,700	1,669,500
Lake trout fry	,529,438 30,000	23,559,438
Salmon fry	5,100 30,000	35,100
Bass fry Bass fingerling No. 1 Bass fingerling No. 2 Bass fingerling No. 3 Bass fingerling No. 4 Bass fingerling No. 5 Total bass ———	832,000 642,100 129,300 12,665 2,950 980	1,619,995
Wall-eyed pike fry	145,000 25,800 39,200 11,100	173,412,000 221,100
	,300,000 944,440	3,244,440
Bluefin fry Crappie No. 2 Crappie No. 3 Crappie No. 6 Total crappie	5,500 7,250 15	2,130,000 12,765
Yellow perch No. 3	625 210	835

oo Wibcollotti contra			
Catfish No. 2		16,800	
Catfish No. 3		16,800 16,350 650	40.000
Catfish No. 2 Catfish No. 5 Total catfish			33,800
Miscellaneous			13,058
Miscellaneous		10.00	213,044,741
DISTRIBUTION BY	HATCHERIE	S. 1923	
	HATCHIMI		
Madison Hatchery Brown trout fingerling No. 1 Rainbow trout fingerling No. 1 Pickerel fry	56.000		
Rainbow trout fingerling No. 1	56,000 924,800 630,800		
Wall-eved Dike IIV	27.000,000		
Miscellaneous	40		28,611,640
Bayfield Hatchery	1,583,600		
Brown trout fingerling No. 2	628.000		
Rainbow trout fingerling No. 1	402,050 35,000 27,500		
Bryfield Hatchery Brook trout fingerling No. 2 Brown trout fingerling No. 2 Rainbow trout fingerling No. 1 Rainbow trout fingerling No. 2 Rainbow trout fingerling No. 3	27,500	464,550	
Total rainbow trout	11,769,438 1,760,000	101,000	
Lake trout fry from U. S. Govt	1,760,000		
Total lake trout		13,559,438	
Salmon fingerling	5,100 30,000		
Lake trout fry Lake trout fry from U. S. Govt. Lake trout fingerling Total lake trout Salmon fry Salmon fingerling Total salmon Miscellaneous	1,302	35,100	16,271,990
Wall-eyed pike fry			18,450,000
Wall-eyed pike fry	27,000,000		
Pickerel fryBass fry	832,000		** *** ***
			28,534,000
Wall-eyed pike fry Bass fingerling	40,250,000		
Bass fingerling	20,000 145,000		
Roach and sunfish	145,000		41,057,000
Wild Rose Hatchery	60,000		
Brook trout fingerling No. 1 Brown trout fingerling No. 1 Rainbow trout fingerling No. 1	1,036,000		
Rainbow trout fingerling No. 1	1,125,000		2,221,000
Spooner Hatchery Wall-eyed pike fry			25,312,000
Engle River Hatchery Wall-eyed pike fry			25,400,000
Lake trout fry	10,000,000 2,300,000 2,130,000		
Whitefish fry	2,300,000		
			14,430,000
Brook trout fingerling No. 1	549,900		
St. Croix Falls Hatchery Brook trout fingerling No. 1 Brook trout fingerling No. 2 Brook trout fingerling No. 3	298,000		
Brook trout fingerling No. 4 Brook trout yearling	154,500 298,000 50,250 18,000		
Total brook trout	144 440	1,070,650	
Rainbow trout fingerling No. 2	144,110		1,214,760
cum Vanding Basses Work			
Gill's Landing Rescue Work Pickerel fingerling No. 4 Bass fingerling No. 2	316,700		
Bass fingerling No. 2	128,000		444,700
Neenah Rescue Work			944,440
Whitebass fingerling No. 3			

U. S. Government Rescue Work Miscellaneous fish			141,495
State Fair Exhibit Miscellaneous fish			300
Fish Rescued from Frenchtown Slot Miscellaneous fish	igh	4	11,416
Miscentaneous han		-	213,044,741
			210,011,1(11
DISTRIBUTION BY	HATCHERIE	S, 1924	
Madison Hatchery	460,000		
Brook trout fry	20,000		
Rainbow trout fingerling No. 1	12 150 000		
Miscellaneous	215		
Miscettaneous			12,934,215
Bayfield Hatchery	9 996 800		
Brook trout fingerling No. 1 Brown trout fingerling No. 1	2,296,800 657,000		
Rainbow trout	501.200		
Rainbow trout Lake trout fry Lake trout fry from U. S. Gov	8,519,190 2,000,000		
Lake trout fry from U. S. Gov	262,500		
Salmon fry	79,200 1,256		
Miscellaneous	1,256		14,317,146
			14,011,144
Minocqua Hatchery Pickerel fry	32,000		
Black Bass fry			378,000
			510,000
Wall-eyed pike fry	50,400,000		
Black Bass fingerling	0.40,000		
Black Bass yearling	200	645,200	
Roach and sunfish fingerling	3,100	040,200	
Miscellaneous			F- 040 BBF
			51,049,335
Wild Rose Hatchery Rainbow trout fingerling No. 1	1.338,100		
Brown trout fingerling No. 1	438,000		
Brown trout fingerling No. 1 Miscellaneous	15		1,776,115
Spooner Hatchery			
Wall-eyed pike fry			25,200,000
Book Bloss Wetsham			
Wall-eyed pike fry			23,400,000
Sturgeon Bay Hatchery Lake trout fry			11,972,000
Lake trout try			
Sheboygan Hatchery	44 400 000		
Lake trout fry	2.700.000		
Whitehalf Hy	101111111111111111111111111111111111111		14,180,000
DISTRIBUTION BY	HATCHERIE	S, 1924	
St. Croix Falls Hatchery Brook trout fingerling No. 1 Brook trout fingerling No. 2 Brook trout fingerling No. 3 Brook trout fingerling No. 4			
Brook trout fingerling No. 1	344,000		
Brook trout fingerling No. 2	1,362,350		
Brook trout fingerling No. 4	1,362,350 1,527,300 164,100		
Total Brook trout		3,397,750	
Brown trout fingerling No. 2	92,600		
Brown trout fingerling No. 3 Brown trout fingerling No. 4	21,000 8,400		
Rainbow trout fingerling No. 1		122,000	
Rainbow trout fingerling No. 1	277,600		3,797,350
Westfield Hatchery	The same of the sa		911011000
Brook trout fingerling No. 1	247,000 174,000		
Brown trout fingerling No. 1	174,000		421,000
WINDOWS CO.			
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Gill's Landing Pickerel fingerling No. 3	43,990
Neensh Rescue Station White Bass fingerling No. 3	169,800
Green Bay Perch fingerling No. 2	4,000
DePere Adult pike	75
Lake Koshkonong Small bullheads	2,500
Peshtigo from below dam Pike	102
U. S. Government Rescue Work Miscellaneous fish	205,055
Fish Rescued from Frenchtown Slough Miscellaneous fish	6,548
Miscerianeous non	159,857,531
DISTRIBUTION BY SPECIES, 1924	
Brook trout fry 460,008 Brook trout fingerling No. 1 2,887,800 Brook trout fingerling No. 2 1,362,350 Brook trout fingerling No. 3 1,527,300 Brook trout fingerling No. 4 164,100 Total brook trout	6,401,55 0
Brown trout fingerling No. 1 1,289.000 Brown trout fingerling No. 2 32,600 Brown trout fingerling No. 3 21,000 Brown trout fingerling No. 4 8,400 Total brown trout ————————————————————————————————————	1,411,000
Rainbow trout fingerling No. 1	2,420,900
Wall-eyed pike fry	111,150,000
Black Bass fry 346,000 Black Bass vearling 250 Black Bass fingerling 666,600 Black Bass No. 4 3,325 Black Bass No. 5 1,050 Black Bass No. 6 800 Total Black Bass	1,018,025
Pickerel fry Pickerel fingerling No. 3 Lake trout fry Salmon fry Steelhead trout 3,100 Roach and Sunfish 40,000 Sunfish No. 2 40,000 Sunfish No. 3 6,500 Sunfish No. 4 4,500	32,000 22,390 33,971,190 262,500 79,200
Sunfish yearling 6,440 Total Sunfish 6,440	60,540
Whitefish fry 3 Whitebass fingerling No. 3 15,000 Crapple No. 2 67,450 Crapple No. 3 67,450 Crapple No. 4 8,200 Total Crapple	2,700,000 169,800
Catfish No. 3	90,650 40,690
Yellow perch	·
Yellow perch No. 5. 4,350 Total Yellow perch Miscellaneous	11,050 16,046
	159,857,531

BIENNIAL REPORT

OF THE

STATE CONSERVATION COMMISSION

OF WISCONSIN

FOR THE

Fiscal years ending June 30, 1925, and June 30, 1926

The Part of Good Citizens-

A people without children would face a hopeless future; a country without trees is almost as helpless; forests which are so used that they cannot renew themselves will soon vanish, and with them all their benefits. When you help to preserve our forests or plant new ones you are acting the part of good citizens.

-Theodore Roosevelt.

Madison, Wisconsin 1926

BIENNIAL REPORT

OF THE

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FOR THE

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Madison, Wisconsin 1926

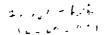
THE CONSERVATION COMMISSION

ELMER S. HALL Commissioner of Conservation

- C. L. HARRINGTON
 Superintendent of Forests
 and Parks
- B. O. WEBSTER
 Superintendent of Fisheries
- MATT. PATTERSON Secretary

- R. L. RIPPLE, Oshkosh

 Asst. Superintendent of
 Fisheries
- H. W. MAC KENZIE, Antigo Chief Warden



LETTER OF TRANSMITTAL

HONORABLE JOHN J. BLAINE,

Governor of Wisconsin.

SIR: Agreeable to the provisions of law, we herewith submit a biennial report of the activities of the Conservation Commission of the State of Wisconsin; and trust that it will meet with your approval.

Respectfully submitted by

ELMER S. HALL,

Commissioner of Conservation.



FOREWORD

ELMER S. HALL, Commissioner.

The biennium just closing has been one of successful operation in each of the four divisions of the Commission. Conservation is today something more than a sentimental appeal, for it has large commercial and industrial phases and no community in Wisconsin, especially none in the upper half of the state, is devoid of an interest in the conservation program. The plans of the department for future growth carry an assurance to the citizens of Wisconsin that their needs in the conservation field will be fully taken care of and that Wisconsin will possess in this connection facilities as good as those offered by any state in the Union.

One hundred and sixty-seven million fish of all varieties were planted in the waters of the state by the Commission during 1926. Of this number eight million were brook trout, three million brown trout, one million rainbow trout. All of the trout planted were of fingerling size. This year's trout planting put Wisconsin in the lead in its efforts to restock the waters of the state and to keep our more than three thousand trout streams in first-class condition for the angler.

The inland lakes also received attention. Millions of bass fry, bass fingerlings from the hatcheries and the Mississippi river, muskellunge and pan fish were reared and distributed. The work with muskellunge was especially noteworthy. While the rearing of fingerling muskellunge is just emerging from the experimental stage, it was advanced to the point where sixteen hundred vigorous individuals from six to ten inches long were reared at the Woodruff hatchery and distributed to the inland lakes especially suited for their development.

New field hatcheries were started at Eau Claire, Brule, Marinette and Sparta. The fish rescue work along the Mississippi bottoms was carried on vigorously, especially for bass fingerlings and the newly established bass ponds along this river furnished a good catch. Ridding the lakes of rough and predacious fish was further developed, both on the part of commercial fishermen as well as state directed crews, and the game fish in the streams and lakes in Wisconsin were never more numerous nor had a better chance to multiply than during and at the end of this biennium.

Realizing that the greatest enemy of new forests is the forest fire, the work of the Commission during the past year has been directed primarily toward the development of an adequate forest protection system. Eleven fire districts, comprising from one to one and one-half million acres, have been laid out. A forest ranger is in charge of each district and a system of lookouts, with telephone communication between them, has been established in most of these fire districts. Fire trucks with pumps and an assortment of fire fighting tools are ready during the fire season for immediate The headquarters for the respective fire districts are located at Brule, Webster, Park Falls, Trout Lake, Crandon, Dunbar, Rhinelander, Radisson, White Lake, Friendship and Tomah. Little trees seeded naturally by the billion over the millions of acres of cutover lands in the state will be given an opportunity to grow up and will not burn up as readily as they have in the past as the plans of the Commission for fire prevention and suppression mature. This activity is progressing, with the assistance of the counties concerned.

The forest nursery at Trout Lake distributed one and one-quarter million little pine and spruce trees for planting in the state the past year. The facilities for raising and distributing these little trees were doubled. About ten acres of additional land was cleared, a water system installed and the work of putting desirable forest trees in the hands of the interested Wisconsin landowners at reasonable prices was increased. There are thousands of places on farms and on the lands of other classes of owners where the planting of several hundred or thousands of little pine or spruce or broad-leaved trees would be a distinct improvement and the effort of the state in producing these native trees in considerable numbers for such work is in

line with its desire to stimulate an interest in tree culture among all her citizens.

The success of the recently closed deer season bears evidence to the results of the activities of the Commission in game protection and development. Thousands of hunters sought the forest haunts of the white-tailed deer during the early part of December. While the early and heavy snows made hunting physically difficult, the concensus of opinion seems to be that the deer are plentiful and the buck law is still held in high regard. The alternate open and closed season for deer is producing good results.

The conditions of other small game is generally good. The duck shooting is not what it should be, but the supply of rabbits, squirrels, raccoon, foxes and other game is fairly good. The activities of the wardens during the year has lead to many arrests and convictions and the protection to the game birds and animals and furbearers afforded by the wardens, together with well considered closed seasons, has had great and beneficial results in keeping our wild creatures of the forest and marshes with us in pleasing and oftentimes commercially important numbers.

To keep up with the growing demand for park facilities, the Commission found it necessary to increase the sanitary conveniences in all of the major parks and to open up new areas for intensive public use. Camping and picnic areas were enlarged, drinking water supplies improved, new trails opened up and an effort made to develop the facilities and rough accommodations that the average person might expect to find on such public areas. A considerable amount of road work was completed, particularly at the Interstate. Devils Lake. Peninsula and Northern Forest Park areas, which was made possible from the fifty-thousanddollar appropriation from the state highway fund. Commission plans to develop certain areas, naturally sought out by the public, in a fairly intensive way, but to leave the greatest area of each park as a wild and native wilderness. Accessibility over good roads and trails, proper sanitation, a plentiful supply of pure drinking water and sufficient policing are some of the major items looked for on the state parks, as well as the opportunity to enjoy the natural assets they possess.

WISCONSIN CONSERVATION COMMISSION



The Shore Line, Peninsula State Park.



Planted Pine, State Land, Star Lake, Northern Forest Park.

RECOMMENDATIONS

FORESTRY

Complete the organization and equipping of the eleven forest protection districts that have been laid out, viz: the installation of lookouts, lines of communication, the necessary fire fighting apparatus, such as trucks, fire pumps, hand tools, etc.

Revision of laws relating to forest, marsh and field fires.

Develop a system of roads and fire lines over all lands owned by the state in large contiguous tracts, so that such areas will be more accessible and their protection made more feasible.

Establish an additional forest tree nursery. Expand activities concerned with the distribution of the native Wisconsin forest trees to farmers and other land owners for planting, and extend the work of education in proper forest practices among all owners of forest or prospective forest land.

Exempt all growing and non-merchantable trees from taxation, and define merchantable trees by diameter, both for hard and for soft woods.

Extend the areas of state-owned forest land by having the state buy title on tax delinquent lands in sizable tracts from the counties, reimbursing local government for loss of taxes because of state ownership for roads and schools.

FISH AND GAME

Purchase the Osceola Fish Hatchery. This hatchery has had over forty years of successful hatching experience, and its acquisition will give the state adequate facilities for brook trout propagation.

Purchase suitable areas of Mississippi bottom lands for bass hatcheries. This is an imperative need as a source of supply for fingerling fish to replenish our many lakes with bass, and other flat fish.

Provision for setting off the upper reaches of trout streams as fish refuges.

Purchase additional fish cars or a number of large trucks for the prompt and efficient distribution of fingerling fish.

Continue the present laws for hunting deer.

Establish four game bird hatchery farms at the Osceola fish hatchery, on the Nelson Dewey and Peninsula Parks, and on the state-owned lands in Dodge County. Many necessary buildings and suitable lands for this activity are already available. The special requirements are good agricultural lands of sufficient area to permit moving the site of the poultry yards each season to prevent congestion and disease.

Provide for the creation of wild life refuges on stateowned lands at the discretion of the Conservation Commission.

Make game refuges on all lands within the present boundaries of the state parks.

Advance the salaries and wages of all employees of the department, which will enable them to better support their families, and stimulate added interest in their work.

PARKS

Extend the system of state owned public park areas and include only the best of the naturally attractive areas in the state in this system, together with a number of large areas of woodland and waters, such as:

- (a) The lands around Copper and Tyler's Fork Falls in Ashland County.
- (b) The Northern Lakes Park area in Price and Sawyer counties.
- (c) The area in the Kettle-Morain district in southeastern Wisconsin.

Complete reasonable, sanitary, road and trail improvements in every state park, so that these public areas may be made accessible and safe for the health and comfort of visitors.

Acquire suitable sized areas of old growth timber along the Trunk Line highways, along well established trails between lakes and at other locations suitable for recreational use. Such timber to be preserved and the areas made available as roadside parks.

FORESTRY DIVISION

During the last biennium the major activities of the commission in forestry have been:

- 1. The improvement of the state owned forest lands.
- 2. The raising and distribution of forest trees.
- 3. The establishment of a forest protection program.

The customary work of protecting the state owned forest lands from fire and trespass has been continued during the past two years. An effort has been made to check up on all reported trespasses, and in spite of the extensive scattering of many descriptions of state owned land this work was reasonably well done. Emphasis has also been laid on the protection of all state owned lands from fire, and other improvement activities notably in the construction of roads and in the planting of trees on suitable areas, has been carried on. Financial tables on all these activities appear in the appendix.

The facilities for raising and distributing the native coniferous forest trees of the state has been doubled during the biennium. The demand for this planting stock has likewise increased. An effective working agreement now exists between the College of Agriculture and this commission by which a considerable number of these forest trees are, through the forester of the extension division, placed in the hands of interested farmers for planting. Many demonstrations in the proper handling of farm wood lots have been held, and the educational work of getting the thousands of landowners of Wisconsin, who are in possession of the soil best suited for the forests of the future, interested in forests and tree culture has been enlarged.

The most outstanding development, however, of the last biennium has been the enlargement of a general forest protection plan for those areas of the state which has a distinct risk from what are commonly called forest fires. This activity will be discussed in more detail, as it is the most important feature in the state's contribution toward an effective forestry policy.

PRIMARY CONSIDERATIONS IN FOREST PROTECTION PROGRAM

"A little fire is quickly trodden out,
Which being suffered,
rivers cannot quench."
Shakespeare.

Land Conditions

Wisconsin has 35,000,000 acres within her borders. Generally speaking, the southern 15,000,000 acres is a region of farms. Open fields and cultivated areas are the rule, but there are numerous wood lots, some areas of virgin hardwood timber, and a few rather exten-



Forest Protection Fire Truck



Norway Pine Timber, Northern Forest Park

sive areas of soil of relatively low fertility. The region is primarily a hardwood region. The woods are generally open, and the risk from destructive fires is small. So far as forest perpetuation is concerned, the grazing of cattle is really a more destructive force than fire over the 15,000,000 acres of southern Wisconsin. It is not likely that any work will ever be done, except in mid-central Wisconsin, in protecting this region from fire except of a general educational nature.

The northern 20,000,000 acres are still primarily an undeveloped region. Here we find farm, forest and cut-over land inter-mixed. The farms for the most part skirt the railroads. The soils of this region are generally fertile, well watered and susceptible of as great a degree of development as has occurred in southern Wisconsin. steady though slow progress is being made in an agricultural way in this northern region, but if the rate of settlement of the past two decades is any indication of future prospects in this connection it is quite apparent that it will take many years before even the better soils are settled. As a matter-of-fact, farm settlement of this region will be materially encouraged by the protection of the land itself from any devastating force. Farms and forests have always thrived It is a common understanding and observation that the farms of upper Wisconsin derive no small part of their income today from what would be called strictly forest or timber activities. It is, therefore, pretty generally agreed that the protection of the countryside from uncontrolled fires is an important part of any program that concerns itself with the development of Wisconsin, and particularly of the northern counties. No argument prevails when fire is used for a beneficial purpose, such as land clearing, but all such fires should be confined to the job or property of the owner. All other fires should be prevented or properly suppressed. Protection from fire is fundamental to any successful program of conservation. Great areas of land in this state, unfit for cultivation, will be available for production only in a conservation way, viz: timber, game, fur farming, recreation, water control, etc. These things will be of equal importance to the northern counties as any other form of development, and should be so considered. Uncontrolled fires are ruinous to any conservation program, and a serious menace to any other form of development.

It is also apparent that the protection of a region from fire is primarily a state undertaking. It is an exercise of the police power reposing in the state. No matter how earnest an owner of land may be to protect his property from fire, his individual efforts meet only with partial success for he is continually jeopardized by fire that may sweep in on him from points miles away. To function properly the protective system must cover the entire area subjected to the fire risk, including all landowners and all circumstances, and must operate consistently year in and year out.

There is, however, a large local responsibility that should be recognized in any fire prevention and suppression program. The sources and causes of fire are invariably local. While towns and even counties are generally too small in area to act independently, their direct participation in this work is not only desirable, but neces-

sary. It is important that the respective responsibilities of state, counties and towns be recognized not only in the law but in actual practice.

Review of Fire Risk

The number, extent and destructiveness of fires depends upon weather conditions primarily. It likewise depends upon the type of soil, the forest cover itself and other important factors. For instance, there is a greater risk in a pine region than there is in a hemlock and hardwood region. The normal fire season over this region opens about April 1st. The risk is light for the first fifteen days. Normally April showers cut down the risk from forest and cut-over land fires. With the approach of May, the risk rises and becomes most acute the second and third weeks of this month. The greening out of vegetation reduces the risk materially the latter part of May and through June, July and August the risk normally is light because of well distributed summer rains. However, it should be borne in mind that a very distinct summer fire risk may develop with any sort of a drought condition which not infrequently occurs. the browning off of the vegetation in the fall the risk from fires rises sharply and the month of October is the month of greatest hazard. The warm days of Indian summer with frosty nights, browned off vegetation and strong warm mid-day winds create a situation of high hazard from all outdoor fires. All the highly destructive fires in the lake states, such as the Cloquet, Peshtigo, and others have occured in The normal weather conditions of the state, therefore, indicate the hazard from outdoor fires in the spring and fall months. Of course, variations occur from season to season. For instance, the season of 1924 was relatively wet, and no material risk from fires all during the summer season developed. Again the prevalence of rains in the spring may reduce the fire risk to the vanishing point. evident that any program for the protection of forest and cut-over land from fire should aline itself with these briefly explained land and weather conditions.

The Proposed Protection Plan

Approximately 14 million acres in Wisconsin are subject to a sufficient risk from uncontrolled fires to warrant protection. This area has been divided into eleven prospective forest protection districts, embracing from 1 million to 1½ million acres each. Eight of these districts are established and organization work in them is proceeding. The state proposes to keep a year long man in each district to manage and carry on the protective activities during periods of ordinary risk. His salary and expenses will be paid by the state, but he will operate with the advice and assistance of a committee of the County Board in each county affected. To facilitate an early detection of fires, look-outs will be established on commanding points in each fire district and communication between them and with the district ranger's office will be provided by telephone. The state, with the assistance of the federal government, will supply, construct and own all primary fire detection and fire suppression equipment and take

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care of and pay for the maintenance and functioning of the organization during periods of ordinary risk. The details, however, and all current information will be known to the County Board, representing, as they will, the local interest and responsibility in this undertaking. Of course, all available individual company, association or local public assistance will be welcomed. Part of the duties of each district forest ranger will be to organize all available local help. For instance, special additional measures for insuring better protection to the property of individuals or concerns will be encouraged but the main effort will be one of government of the state and the district forest ranger will enforce all laws relating to forest, field and marsh fires and take charge of the current functioning of the entire organization.

It is quite apparent, however, that during times of drought and emergency a special force of emergency fire wardens will be needed. The number of such men required will depend upon seasonal circumstances, and the field force of necessity must expand as the risk increases and shrink as the risk decreases. Each forest protection district will be in turn divided into patrol or special fire warden districts, and in each such area a special warden, he having received beforehand the recommendation of the town chairman or approval of the County Conservation Committee, will be deputized. He will be a man having a special interest in fire prevention and suppression, or peculiarly well located to be of service in the organization. An allotment of fire suppression tools will be issued to him and such supplies as he will need, and he will be ready to call out men to fight any fire that occurs. The Special fire warden, as well as any men he hires to fight fires, will be paid for the time actually served. He will act under orders from the district forest ranger and any expense incurred in the work of actual fire suppression will be paid one-half by the state and one-half by the county. The towns will not be called on to pay any fire fighting bills. As organization proceeds in the fire districts and the work is better understood, the actual number of fires occurring, as well as the acreage burned over, should decrease materially, resulting in a constantly lessening expense. The fire protection efforts will extend to all land outside of incorporated limits, whether cut-over or timbered, and irrespective of ownership, and of course the fire laws will apply to all persons and concerns in the district.

Forest Protection Districts

	Counties	Headquarters
Dist.	1-Douglas and Bayfield	Brule
Dist.	2-Washburn and Burnett	_Webster
	3-Vilas and Iron	
Dist.	4-Forest and portion of Florence	_Crandon
Dist.	5-Marinette and portion of Florence	_Dunbar
Dist.	6-Price and Ashland	_Park Falls
	7—Oneida and Lincoln	
Dist.	8—Sawyer and Rusk	_Radisson
Dist.	9-Oconto, Langlade and Shawano	_White Lake
	10-Wood, Juneau and Adams	
Dist.	11—Jackson and Monroe	_Tomah



The Brule River Trout Hatchery



The Bayfield Hatchery

Up to the present 39 lookout towers have been erected, about 400 miles of telephone line constructed and the fire districts are equipped with five one ton trucks, three runabouts, ten Evinrude fire pumps, 10,000 feet of hose, 150 four and five gallon fire extinguishers, 4,000 shovels and a small supply of axes, saws, pails, back firing torches and other hand tools used in fire suppression. In addition a complement of special fire wardens located in all parts of each organized fire district have been deputized as assistants to the district forest ranger. These deputies are appointed on recommendation of the respective town chairmen. The coming season each of these deputies will be issued tools for fire fighting sufficient to equip a crew of twelve men.

FISHERIES

The artificial propagation of fish as is practiced in this state has been going on in the world since long before the Christian Era. It is recorded that fish were artificially hatched and planted in China many thousands of years ago. The methods employed and success obtained has naturally improved as time has gone on. Today there are still vexing problems that fish culturists have to face and on account of the lack of scientific knowledge, many times disastrous losses occur. The fish culturist obtains fish culture knowledge from practical experience, and when trouble comes to his young fish he has to depend upon a few simple remedies to cure the trouble.

Fish culture work has been carried on in Wisconsin since 1873. Under Chap. 211 of the session laws of that year, the sum of five hundred dollars was appropriated to be expended under the direction of the U. S. Commissioner of Fisheries for the artificial propagation of fish for our lakes and streams. As near as can be estimated, twenty thousand salmon were hatched at a private hatching house located at Waterville in Waukesha County and planted in lakes around Madison and Lake Geneva.

The following year, under Chap. 253 of the session laws of 1874, there was appointed a Commission of Fisheries. The legislature appropriated three hundred and sixty dollars to carry on the fisheries work. Twelve other states named respectively as follows: Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Pennsylvania, Alabama, California and Michigan, had already been provided with fish commissioners.

The first appropriation asked for by the newly appointed commission was from eight to ten thousand dollars. From that small but well laid foundation one of the finest fish propagation organizations in the world has been developed.

The first hatchery in this state was established in the year 1875 and was located about five miles out of the city of Madison and was known for many years as the Nine Springs Hatchery. It is now

known as the Madison Hatchery and is still in operation. Millions of rainbow and brown trout eggs are collected each year from the fine stock of brood fish that are held in the ponds on the grounds.

From time to time in the past fifty years other hatcheries have been established as needs required and the money was available, until now the state is operating twenty-two fish hatcheries located in the following places: Madison, Bayfield, Wild Rose, Minocqua, Delafield, Oshkosh, St. Croix Falls, Sturgeon Bay, Sheboygan, Osceola, Lakewood, Hayward, Westfield, Spooner, Eagle River, Tenney Park, Sparta, Eau Claire, Brule, Marinette, Haugen and Wisconsin Rapids. In these various hatcheries are hatched and distributed about one hundred and fifty million fish each year, the summary of which is given for each hatchery in this report.

The Osceola Hatchery, devoted to brook trout culture, was put in operation during the biennium. It is a well situated plant, and the quantity and quality of the water supply gives good assurance that it will be developed into one of the most productive hatcheries in the state. This hatchery is now operated on a rental basis and it is hoped that the coming legislature will see fit to appropriate sufficient money to purchase it.

Kinds of Fish

Nearly every kind of fresh water fish that are known as fine fish in Wisconsin are distributed by the Commission. In the twenty-two hatcheries brook, rainbow, brown and lake trout and whitefish are hatched for our cold water streams and Lake Superior, Green Bay and Lake Michigan; while bass, blue gills, pike, muskellunge, pickerel, white bass, perch, bullheads and many other kinds of pan fish belonging to the sunfish family are either hatched at the hatcheries or rescued from the overflowered lands of the Mississippi, Fox and Wisconsin rivers and planted in our inland lakes and rivers.

Muscallonge Culture

The artificial propagation of muscallonge was carried on in an experimental way during the past spring at the Minocqua Hatchery. The successful raising of two thousand musky fry to a nine inch size in five months warrants the development of the work as a regular part of the activities of the fish department.

Commercial Work

This state is the only one of the Great Lakes States that carries on a very extensive commercial fish propagation work. At least one-half of the fish work done at the Bayfield station is of the commercial kind as millions of fish are hatched there each year for planting in Lake Superior. We also receive for that station each year from the U. S. Bureau of Fisheries from one to two million lake trout that are hatched at their U. S. Duluth hatchery for planting in Wisconsin waters. The inland trout stream work is also well taken care of from that hatchery as millions of brook and brown trout eggs are taken every year from the stock of brood fish that are always

held there. The other commercial hatcheries are located at Sheboygan and Sturgeon Bay, each hatchery having a capacity of about sixteen million lake trout and fifty million whitefish eggs.

The Commission does not feel that any new kinds of fish need to be introduced into the waters of this state inasmuch as we have all of the finest varieties of the fresh water finny tribe native to our waters, but for the benefit of the commercial fisheries, experiment in the introduction of Pacific salmon for the waters of Lake Superior is being carried on at the Bayfield plant. Only two hundred thousand fish are planted each year, which is a very small amount for such a large body of water and in comparison to the millions of lake trout that are planted there each year. This experiment has been going on for about five years now, but only occasionally are the salmon caught by any of the fishermen.



Game Fish devoured by eight Lawyers. A sample of rough fish work done by the Commission in Lake Winnebago district waters.

Removal of Rough Fish

The legislature in 1925 appropriated ten thousand dollars for the removal of undesirable rough fish from the waters of the Lake Winnebago basin and fifteen thousand dollars for the same use in waters of the northern counties. This work of ridding these waters of rough fish has been efficiently carried on during the past year, and has resulted in clearing out of many tons of suckers, dogfish, eel pout and sheepshead. A small portion of these fish found a market from local residents and resulted in a small money return to the appropriations. These funds still contain money enough to prosecute the work during the coming year.

Distribution

The methods of rearing fish for distribution were entirely changed in the last five years. Until very recently it was almost universally acknowledged that the best way to get results from all kinds of fish planting was to hatch and plant them while they were quite small, or what is known as the fry stage. That method today is universally Insofar as it is possible, all fish are raised in the hatcheries now until they have learned to feed and grown to a size that makes it reasonably sure that a large percentage of them will come to This method has made it necessary to increase our fish maturity. car rolling stock; consequently the Northwestern Railway Company was requested this year to furnish the Commission with two baggage cars, which they very kindly did. These cars were equipped with living quarters for the crews and a pumping system to enable each can of fish to have a fresh supply of oxygen from the time they were taken from the cool, live flowing water in the hatchery until they were delivered to the applicant at the railway station near where they were to be planted. By the use of plenty of ice during the hottest weather, many thousands of cans of fish are delivered each year with comparatively small loss.

Rescued Fish

The fisheries work is not all confined to the work done in the fifteen hatcheries in the state as there are several places in the state where millions of fish are rescued from overflowed lands and planted in lakes and rivers where they have a good chance of growing to a catchable size to fish.



Lifting a Commercial Fishing Net

イド日子富

Carp Fishing

Some thirty-five or forty years ago the state officials were besieged with applications from all over the state for young carp for planting in our inland waters. It was thought at that time that they were a very fine food fish. The federal government furnished the first supply and as the demand became more urgent, Wisconsin made an effort to raise their own and these operations were carried on until most of our southern waters were fairly well stocked. The introduction of these fish was a great mistake as has been proven as the years have gone by and in order to keep down the population of this species to a point where they will not entirely drive out the fine fish, the Commissioner issued permits to commercial fishermen to take them out with seines only and their catches last year were valued at about \$117.784.00. They furnish food to a large number of people.

Wisconsin has thousands of lakes and about ten thousand miles of trout streams that have a fine fish population that make the state an ideal place for sportsmen.

GAME

Acting under petition from the majority of the counties in which deer are numerous, the legislature of 1925 enacted a law for the alternate opening and closing of the shooting season for deer. Accordingly during 1926 there was a continuous closed season, and reports from all parts of the state indicate a surprising increase in the number of deer. As the open season of 1926 approaches all indications point to a numerous deer population, and the season should be one of satisfaction to the hunters of the state. The closed season, together with the buck law, has again demonstrated its merits as a practical means of replenishing the supply of game.

During the biennium the supply of game birds has been a reasonable one. The nesting seasons have been fair for the birds, but extensive fires in the spring of 1925, especially over the pine plains, was destructive of many nests and birds. The supply of birds during the early and middle part of 1926 was not what it should be, and considerable discussion is now going on to restrict the shooting this coming fall. Of course, the open season is fixed by law, and the most practical measure left to protect the birds, especially the partridge, is to appeal to the hunters to refrain from shooting this coming season. It is quite apparent at this time that additional protection must in the near future be given to the partridge, and the alternate open and closed season should prove its merits for partridge as it has done for deer.

Beaver have rapidly multiplied in the state during the last few years. Repeated complaints of damage caused by them reached this office. Sooner or later some plan for their reduction must be determined upon, as the loss of timber through flooding, the disturbance to trout fishing and spawning, the interference with roads, land lookers, railroads, hay meadows, etc. caused by the high water from their dams undoubtedly exceeds their value as fur bearers. While the policy of extermination, actively advocated by some people, may be extreme, it is equally certain that a reduction in their numbers is advisable and it is hoped that legislation to affect such reduction will be enacted by the coming legislature.

`Generally speaking the game supply in the state may be said to be fair to good.' The activities of the wardens have lead to many arrests and convictions. Under the system of district wardens now in vogue the general supervision and cooperation among the field force has been improved. General tables of arrests and fines appear in the appendix.

STATE PARKS

The eleven state parks, a list of which follows, were never in better condition to take care of the demands of the public than at the present time. During the past two years fairly extensive improvements in providing better sanitation and better drinking water supplies, as well as in the development of all other recreational facilities, have been made. This is particularly true at Devils Lake and in the Interstate, Peninsula, Pattison, and Nelson Dewey Parks. The legislative appropriation of \$50,000.00 annually for roads in and to state parks has enabled this commission to begin opening up and connecting these public areas with state trunk highways. Contracts are now let, for work in the Northern Forest Park and Nelson Dewey Park, and the road improvements at the Interstate and Peninsula Parks of the past season are completed. Altogether the work of this commission on the state parks during the past two years had added very materially to their public usefulness, and the patronage to these public areas is increasing from season to season. This patronage now numbers hundreds of thousands of visitors annually.

In addition to the present state parks it is becoming increasingly evident that sizeable areas of natural wilderness, embracing lakes, rivers, forests and wild life, are necessary in a well rounded state park program.

Wisconsin is well located and possesses the requisite advantages of climate and scenery, good roads and living accommodations to be the natural playground for the millions to the south of us. Our thousands of forested lakes and trout streams, the scenic and historic north and east shores washed by Lake Superior and Lake Michigan respectively, the bluffs of the Mississippi on our west, unexcelled hunting and fishing, a fall forest coloring unequalled anywhere, and a cool invigorating summer climate are some of the attractions

offered to the tourist, whether of our own or an adjoining state. But more than that there have been, and will continue to be, attractive public areas set aside at convenient places in the state, where these tourists may find good water, sanitary living conditions, and the rough comforts that one would expect on an outing. The tourist driving the Cadillac as well as the man driving a Ford will be provided for either at the regular hotels or resorts along the way or in his own tent, should he care to carry one. In this general plan the state parks will play an important part.



The Gorge at Copper Falls, Mellen— Ashland County

It is the opinion of the Conservation Commission that only the most outstanding, the most unique or most historic areas in the state should be included in the state park system, and that these areas should be selected with the utmost care. Embracing so many attractive places for park purposes, it is obvious that the state cannot own and take care of them all. Therefore, it is felt that a series of county and township parks should eventually supplement the state park system, and that these areas should be owned and managed by local bodies. While they will primarily serve local needs they should nevertheless be public in their nature, so as to provide for the tourist and furnish him a spot where he knows he will be welcome.

	•		
Name of Park	A_{7}	·ea	Location
Devils Lake	1,400	acres	Baraboo, Sauk County
Peninsula	4,000	acres	Fish Creek, Door County
Interstate	580	acres	St. Croix Falls, Polk County
Nelson-Dewey	1,500	acres	Wyalusing, Grant County
Pattison	660	acres	Superior, Douglas County
Perrot	910	acres	Trempealeau, Trempealeau Co.
Cushing	8	acres	
Tower Hill	60	acres	Iowa County
Old Belmont (First			•
State Capitol)	2	acres	Belmont, Lafayette County
Rib Hill	160	acres	Wausau, Marathon County
Brule	640	acres	Brule, Douglas County
Northern Forest	76,000	acres	Trout Lake Vilas County



A part of the Elk herd—State Game Farm Northern Forest Park.

FINANCIAL STATEMENT

OF

STATE CONSERVATION COMMISSION

Fiscal years of

July 1, 1924 to June 30, 1925

and

July 1, 1925 to June 30, 1926

July 1, 1924, to June 30, 1925

OPERATION

Appropriation	\$245,675.00 14,266.95 61.68	
Total disbursements	01.00	\$251,930.12 8,073.51
	\$260,003.63	\$260,003.63
REPAIRS AND MAINTEN	ANCE	
Appropriation Unexpended balance Total disbursements Unexpended balance	\$21,725.00 348.08	\$21,736.49 336.59
Onexpended balance	\$22,073.08	\$22,073.03
PROPERTY AND IMPROVE	EMENTS	
Appropriation Unexpended balance Total disbursements Unexpended balance	142.10	\$24,655.99 436.11
	\$25,092.10	\$25,092.10
TOTAL DISBURSEMEN	NTS	
Operation Repairs and maintenance Property and improvements	21.736.49	•
	=======	\$298,322.60
CLASSIFICATION OF DISBUI	RSEMENTS	
Administration Forestry Parks Fisheries Wardens	25,277.06 20,178.11 82,178.63	
		\$298,322.60

ADMINISTRATION

Salaries Supplies Printing Postage Telephone and telegraph Express, freight and drayage State car expense Employees expenses Advertising Property	\$22,653.04 2,218.46 3,605.64 1,637.18 808.79 236.06 1,726.57 3,190.13 28.05 850.05	\$36,953.97
	======	
FORESTRY		
Salaries and labor Supplies Employees expense Repairs Property and improvements Telephone Advertising Insurance	\$8,824.61 3,659.24 3,556.88 7,227.01 1,551.26 11.25 2.80 444.01	\$25,277.06
PARKS		
Salaries and labor Supplies Repairs Property and improvements Employees expenses Telephone Advertising Insurance	\$9,856.05 1,812.00 4,106.30 3,400.14 200.69 41.88 9.11 751.94	\$20,178.11
		#20,110.11
PARKS		
Peninsula Devil's Lake Interstate Nelson-Dewey Pattison Brule Belmont Tower Hill	\$4,741.24 9,236.10 1,197.60 1,542.07 1,526.27 175.79 25.00 1,734.04	\$20,178.11
WARDENS		
Railroad fares Hotel expense Livery expense Auto mileage Other expense Auto supplies Gas and oil Provisions and supplies Telephone Boat repairs Repairs Property and improvements Express, freight and drayage Insurance		
		\$133,734.83

FISHERIES

Madison Hatchery Bayfield Hatchery Oshkosh Hatchery Minocqua Hatchery Delafield Hatchery Wild Rose Hatchery Sturgeon Bay Hatchery Sheboygan Hatchery Spooner Hatchery Eagle River Hatchery Et Croix Falls Hatchery Tenny Park Hatchery Westfield Hatchery Hayward Hatchery Lakewood Hatchery Distribution of fish State Fair Exhibit Collection of fish spawn	\$8,709.56 15,637.44 298.56 3,105.61 3,622.85 6,584.52 3,620.68 3,571.76 777.99 16,520.62 372.33 1,502.02 1,706.18 8,833.54 5,885.76	\$82,178.63
FISHERIES		
Salaries and labor	\$81,065.70 7,900.92 8,214.79 10,872.96 13,333.27 453.35 6,985.36 1,274.87 1,316.50 1,260.87	\$82,178.63
FIRE PREVENTION AND CONTROL	(WEEKS L	AW)
Balance July 1, 1924 Reimbursement by U. S. Government Refunds Disbursements Unexpended balance	\$6,444.73 12,132.98 527.68	\$19,002.53 102.81
· · · · · · · · · · · · · · · · · · ·	\$19,105.84	\$19,105.84
CLASSIFICATION OF DISBURSEMENT Salaries and labor	\$13,436.97 2,630.04 864.60 39.05 104.51 1,927.36	\$19,002.53
FOREST NURSERY		
Unexpended balance	\$3,469.39 4,000.00 17.50	\$5,625 .29
Unexpended balance	\$7,486.89	\$7,486.89
-	71,100.03	71,700.09

CLASSIFICATION OF DISBURSEMENTS	FOREST	NURSERY
Salaries and labor	\$2,447.74 29.67 2,732.99 414.89	
		\$5,625.29
TWO NEW FISH HATCH	ERIES	
*Lakewood & Haywa	rđ	
Unexpended balance	\$4,765.47	\$4,718.1 6 47.31
	\$4,765.47	\$4,765.47
CLASSIFICATION OF DISBURSEMENTS-	-NEW HAT	CHERIES
Salaries and labor	\$1.008.50	
Supplies Employees expenses	\$1,008.50 1,300.98 70.60	
		\$2,380.08
Hayward		
Salaries and labor Supplies Employees expenses Drayage	\$692.25 1,478.08 155.75 12.00	
•		\$2,338.08
GOVERNMENT REFORESTATI		
Unexpended balance Receipts for year Disbursements Unexpended balance	\$2,753.25 2,747.50	\$1,382.81 4,117.94
- -	\$5,500.75	\$5,500.76
CLASSIFICATION OF DISBURSEMENTS	-REFORES	TATION
Salaries and labor	\$781.50 601.31	•
- -		\$1,382.81
•		
PARK ROADS FUND		
Unexpended balance	\$24,154.72 35,000.00	404 444 5-
Disbursements Unexpended balance		\$24,603.51 84,551.21
=	\$59,154.72	\$59,154.72

CLASSIFICATION OF DISBURSEMEN	rs-park r	OADS
Salaries and labor	\$18,384.65	
		\$24,603.51
=	======	
DEVIL'S LAKE BOAT F	UND	
Unexpended balance Receipts for the year Disbursements Unexpended balance		\$919.37 1,292.36
_	\$2,211.73	\$2,211.73
CLASSIFICATION OF DISBURSEMEN Salaries and labor	TS—BOAT F \$479.25 440.12	\$919.37
PARK PURCHASE FUR	4D	
Unexpended balance	\$21,286.50 6,559.37	\$ 27,845.87
Chexpended balance	\$27,845.87	
FURS ERRONEOUSLY TAKEN FROM	A. L. DOMI	NITZ
Chapter 185—Laws of 1		
Appropriation Disbursement	\$47.75	\$47.75
· =	\$47.75	\$47.75
FIRE LOSS—AUTO		
Insurance	\$57.21	
Disbursements	·	\$57.21
	\$57.21	\$57.21
FIRE LOSS—TOMAHAWK LAR	E CABIN	
Insurance	\$3,150.00	
Unexpended balance		\$3,150.00
	\$3,150.00	\$3,150.00
CONSERVATION FUNI	D	
Balance in fund July 1, 1924 Refunds of disbursements Receipts for year Refunds of receipts Disbursements	\$313,468.96 61.68 481,513.89	\$1,074.10 808,145.72 490,824.71
Unexpended balance June 30, 1925		490,824.71

\$795,044.53 \$795,044.53

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ARRESTS

Number 605	Warden fees \$991.96	Fines imposed \$26,485.00
CONFISCATIONS		
Number 818	•••••	Sold for \$3,623.11
TOTAL RECEIPTS FROM JULY 1, 1924	TO JUNE 3	0, 19 2 5
Nonresident fishing licenses Great Lakes fishing licenses. Mississippi River fishing licenses Fish Dealer's licenses Rough fish Resident hunting licenses Duplicate licenses Duplicate licenses Settler's hunting licenses Confiscations Warden fees Trapping licenses Set line licenses Guide licenses Guide licenses Deer tags Trap tags Clamming licenses Park leases and concessions Island leases and nursery stock Miscellaneous Devils Lake boat receipts. Fire control (Weeks Law) Insurance receipt July 1, 1925 to June 30,		1,200.00 53,895.03 158,771.80 19,300.00 288.00 227.00 3,623.11 9,729.40 1,403.50 554.00 25,106.60 21,994.60 6,559.37 2,747.50 7,422.52 1,458.25 12,660.61
OPERATION		
Appropriation Unexpended balance Refunds One half rough fish receipts Total disbursements Unexpended balance	\$245,675.00 8,073.43 569.00 23,556.88	\$249,973.06 27,901.25
•	\$277,874.31	\$277,874.81
REPAIRS AND MAINTEN	\$32,300.00	
Unexpended balance Total disbursements Unexpended balance	386.59	\$81,959.76 676.83
	\$32,686.59	\$32,636.59
•		
PROPERTY AND IMPROVE Appropriation Unexpended balance Refunds Total disbursements Unexpended balance	\$39,250.00 436.11 132.14	\$39,173.65 644.60
	\$89,818.25	\$39,818.25
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BIENNIAL REPORT

TOTAL DISBURSEMENTS

Operation Repairs and maintenance Property and improvements	31,959.76 39,173.65	
Property and improvements		\$321,106.47
•		
CLASSIFICATION OF DISBUI	RSEMENTS	
Administration Forestry Parks Fisheries Wardens	\$41,763.62 14,823.07 23,256.64 103,630.48 137,632.66	\$321,106.47
ADMINISTRATION	•	
·	\$23,241.64	
Salaries Supplies Printing Postage Telephone and telegraph Express, freight and drayage State car expense Employees expenses Advertising Property Insurance	1,602.04 7,101.71 2,151.44	\$41,763.62
:		=======================================
FORESTRY		
Salaries and labor Supplies Employees expenses Repairs Property and improvements Insurance	\$4,372.12 1,534.57 1,843.22 2,775.06 2,27	\$14,823.07
PARKS		
Salaries and labor Supplies Repairs Property and improvements Employees expenses Telephone Printing Insurance	\$5,766.20 3,100.83 7,090.29 5,235.09 599.16 74.9 151.41 1,238.77	\$23,256.64
, D. D. T.		
PARKS	*4 202 12	
Peninsula Devils Lake Northern Forest Interstate Nelson-Dewey Pattison Brule Belmont Tower Hill Cushing Memorial	\$4,303.13 7,362.65 4,853.09 3,255.55 1,518.81 1,281.16 6.48 73.20 419.33 183.24	
		\$23,256.64

WARDENS

WARDEN		
Salaries Railroad fares Hotel Livery expense Auto mileage Other expense State car expense Auto supplies Gas and oil Provisions and supplies	\$84,103.36 1,811.66 17,194.24 327.26 2,879.02 10,394.27 2,356.97 2,17.66	
Telephone Repairs Property and improvements Insurance	2,037.52 461.84 215.27 3,495.48 325.21	
:		\$137,632.66
FISHERIES		
Madison Hatchery Bayfield Hatchery Oshkosh Hatchery Minocqua Hatchery Delafield Hatchery Wild Rose Hatchery Sturgeon Bay Hatchery Sheboygan Hatchery Spooner Hatchery Eagle River Hatchery St. Croix Falls Hatchery Tenny Park Hatchery Osceola Hatchery Hayward Hatchery Lakewood Hatchery Westfield Hatchery Westfield Hatchery Distribution of fish State Fair exhibit Collection of fish spawn	\$10,550.52 11,917.10 79.38 3,002.44 3,261.31 8,307.64 7,497.77 4,213.66 101.67 72.14 17,135.80 11,652.35 3,947.68 2,323.07 1,535.05 1,535.05 9,082.03	\$103,630.48
FISHERIES		
Salaries and labor Fish food Supplies Repairs Property and improvements Telephone Employees expenses Drayage Insurance	\$26,900.12 10,014.75 11,920.37 21,784.98 24,080.87 5,630.39 1,470.76 1,242.73	\$108,680.49
EMERGENCY FIRE WAR	DENS	
Total disbursements		\$4,828.38
BOUNTIES		
Total disbursements	····	\$67,437.00
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BIENNIAL REPORT

FIRE PREVENTION	ON AND	CONTROL	(WEEKS	LAW)

Balance July 1, 1925	\$102.81 29,278.79	
Refunds Disbursements Unexpended balance	137.35	\$22,634.74 6,884.21
	\$29,518.95	\$29,518.95
CLASSIFICATION OF BURSEMENT		LAW
Salaries and labor Supplies Employees expenses Printing	\$17,712.68 2,868.64 1,747.79 305,63	
	\$22,634.74	\$22,634.74
PARK PURCHASE FU	ND	
Unexpended balance Receipts for year Transferred to Land Exchange Fund Disbursements Transferred to Park Sanitation Unexpended balance	\$27,845.87 5,107.20	\$25,000.00 4,130.00 1,800.00 2,023.07
• -	\$32,953.07	\$32,953.07
CLASSIFICATION OF DISBURSEMENTS—PA	\$4,130.00 \$4,130.00	\$4,130.00
SANITATION—INTERSTATE	PARK	
Transferred from Park Purchase Fund Disbursements Unexpended balance	\$1,800.00	\$286.15 1,513.85
•	\$1,800.00	\$1,800.00
CLASSIFICATION OF DISBURSEMEN'	TS—SANITAT	TION
Salaries and labor	\$286.15	
- -	\$286.15	\$286.15
LAND EXCHANGE FUR Transferred from Park Purchase Fund	\$25,000.00	
Disbursements	\$25,000.00	\$25,000.00
	\$25,000.00	\$25,000.00
=		
FIRE PROTECTION		
Appropriation Disbursements Unexpended balance	\$25,000.00	\$24,978.07 21.98
	\$25,000.00	\$25,000.00
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CLASSIFICATION OF DISBURSEMENTS-	FIRE PRO	TECTION
Salaries and labor	\$10,933.09 10,822.99 3 1.99	
		\$24,978.07
DEVILS LAKEDE BOAT F	UND	
Unexpended balance Receipts for year Disbursements Unexpended balance	\$1,292.86 1,599.30	\$761.30 2,130.36
	\$2,891.66	\$2,891.66
•		
CLASSIFICATION OF DISBURSEMEN		FUND
Salaries and labor	\$528.35 232.95	
		\$761.30
FIRES ON STATE LANDS—NORTH	OF TOWN N	n 98
Disbursements—labor	\$1,793.37	J. 00
		\$1,793.87
REMOVAL OF ROUGH FISH—NORT		ERS
Appropriation Disbursements Unexpended balance	\$15,000.00	\$5,879.84 9,120.16
-	\$15,000.00	\$15,000.00
CLASSIFICATION OF DISBURSEMENTS—R.	F NORTHE	RN WATERS
Salaries and labor Supplies Employees expenses Drayage	\$2,529.54	W. W. 1244
•		\$5,879.84
DODDOM MUDGEDA		
FOREST NURSERY Appropriation	\$4,000.00	
Unexpended balance Disbursements Unexpended balance	1,861.60	\$3,446.39 2,415.21
-	\$5,861.60	\$5,861.60
CLASSIFICATION OF DISBURSEMENTS-		IIDGGGV
Salaries and labor	\$1.670.39	OTORICI
Supplies Employees expenses Printing	1,844.29 422.05 9.66	
		\$3,446.89

BIENNIAL REPORT

REMOVAL OF ROUGH FISH-WINN	EBAGO WAT	ERS
Appropriation Rough fish receipts Disbursements Unexpended balance	\$10,000.00 222.35	\$8,550.83 1,671.52
:	\$10,222.35	\$10,222.35
CLASSIFICATION OF DISBURSEMENTS-R. F	r. WINNEBA	GO WATERS
Salaries and labor	\$4,848.00 2,933.03 684.30 85.50	
		\$8,550.83
MISSISSIPPI RIVER FISH RESC	THE WORK	
One half rough fish receipts	\$23,556.87	
Disbursements Unexpended balance	,,	\$18,532.49 5,024.38
- -	\$23,556.87	\$23,556.87
CLASSIFICATION OF DISBURSEMENTS—		E WORK
Salaries and labor	\$7,153.60 9,447.66	
Employees expenses Drayage Telephone	9,447.66 1,731.88 169.00 30.85	
•		\$18,582.49
=		
POLLUTION OF STREA	MS	
Appropriation	\$10,000.00	\$5,492.19 4,507.81
- -	\$10,000.00	\$10,000.00
CLASSIFICATION OF DISBURSEMENTS—WORK	STREAM PO	DLLUTION
Salaries Employees expenses Supplies	\$3,917.18 1,544.64 30.37	
=		\$5,492.19
PARK ROADS		
Unexpended balance	\$34,551.21	
Appropriation Disbursements Unexpended balance	50,000.00	\$21,651.93 62,899.28
′ - =	\$84,551.21	\$84,551.21
CLASSIFICATION OF DISBURSEMENT		OADS
Salaries and labor	\$13,308.22 8,191.00 152.71	
- -		\$21,651.93

GOVERNMENT REFORESTATI	ON FUND	
Unexpended balance Receipts for year Refunds Disbursements	\$4,117.94 3,503.81	\$23.00 3,476.96 4,121.29
Unexpended balance	*7 491 Pr	
=	\$7,621.25	\$7,621.25
CLASSIFICATION OF DISBURSEMENTS—G	OV'T REFOR	ESTATION
Salaries and labor	\$1,407.25	
Supplies Employees expenses	1,849.00 220.71	• • • • • • • • • • • • • • • • • • •
=		\$3,476.96
FIRE LOSS		
Building Minocqua Hatel	hery	
Insurance Disbursements	\$51.21	\$51.21
	\$51.21	\$51.21
,		
FIRE LOSS		
Unexpended balance	m \$3,150.00	
Disbursements Unexpended balance	40,100.00	\$3,150.00
•	\$3,150.00	\$3,150.00
:		
FIRE LOSS		
Insurance	\$300.00	
Disbursements		\$300.00
:	\$300.00	\$300.90
FIRE LOSS		
Vilas County House		
Insurance Disbursements Unsynended belong	\$180.00	
Unexpended balance		\$180.00
:	\$180.00	\$180.00
EMERGENCY APPROPRIATION FROM C ADDITIONAL LAND FOR HA	CONSERVATION TOHERY	ON FUND
Appropriation 5/11/26	\$5,900.00	
Unexpended balance		\$5,900.00
:	\$5,900.00	\$5,900.00
EMERGENCY APPROPRIATION FROM C EQUIPPING ADDITIONAL FIRE	DISTRICTS	N FUND
Appropriation 5/26/26 Disbursements	\$40,000.00	
Unexpended balance	\$40,000.00	\$40,000.00
=		
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' EMERGENCY APPROPRIATION FROM CO MISSISSIPPI RIVER FISH HATC	HERY SITES	3
Appropriation 5/26/26	\$20,000.00	\$20,000.00
- Control of the cont	\$20,000.00	\$20,000.00
=		
EMERGENCY APPROPRIATION FROM C ADDITIONAL CONSERVATION	ONSERVATIO WARDENS	ON FUND
Appropriation 5/26/26	\$25,000.00	\$25,000.00
•	\$25,000.00	\$25,000.00
CONSERVATION FUN	D	
Balance in fund July 1, 1925	\$490,824.71	
Balance in fund July 1, 1925	27,845.87 102.81	
Transferred from Boat Fund	1,292.36	
Refunds of disbursements	101.12	
Refunds of disbursements Receipts Refunds of receipts	492,519.87	e 9 451 49
Bountles		\$2,451.48 67,437.00
Disbursements		67,437.00 422,771.48 522,488.45
•		
	\$1,015,148.36	\$1,015,148.36
ARRESTS		
Number 1049	Warden fees \$1,588.40	Fines imposed \$45,500.00
1049	fees	imposed
	fees \$1,588.40	imposed \$45,500.00 Sold for
CONFISCATIONS Number 561	fees \$1,588.40	1mposed \$45,500.00 Sold for \$7,727.73
CONFISCATIONS Number 561 TOTAL RECEIPTS FROM JULY 1, 1928	fees \$1,588.40 5, TO JUNE	1mposed \$45,500.00 Sold for \$7,727.73
CONFISCATIONS Number 561 TOTAL RECEIPTS FROM JULY 1, 1925	fees \$1,588.40	1mposed \$45,500.00 Sold for \$7,727.73
CONFISCATIONS Number 561 TOTAL RECEIPTS FROM JULY 1, 1925 Nonresident fishing licenses Great Lakes fishing licenses. Mississippi River fishing licenses.	fees \$1,588.40	1mposed \$45,500.00 Sold for \$7,727.73 30, 1926 \$161,873.70 7,502.75
CONFISCATIONS Number 561 TOTAL RECEIPTS FROM JULY 1, 1928 Nonresident fishing licenses Great Lakes fishing licenses Mississippi River fishing licenses.	fees \$1,588.40	1mposed \$45,500.00 Sold for \$7,727.73 30, 1926 . \$161,873.70 . 7,502.75 . 3,212.25 6,414.00
CONFISCATIONS Number 561 TOTAL RECEIPTS FROM JULY 1, 1928 Nonresident fishing licenses Great Lakes fishing licenses Mississippi River fishing licenses.	fees \$1,588.40	1mposed \$45,500.00 Sold for \$7,727.73 30, 1926 . \$161,873.70 . 7,502.75 . 3,212.25 6 414.00
CONFISCATIONS Number 561 TOTAL RECEIPTS FROM JULY 1, 1928 Nonresident fishing licenses Great Lakes fishing licenses Mississippi River fishing licenses Fish shipping coupons Rough fish Resident hunting licenses Nonresident hunting licenses	fees \$1,588.40	1mposed \$45,500.00 Sold for \$7,727.73 30, 1926 \$161,873.70 7,502.75 2,212.25 6,414.00 47,113.75 148,596.75
CONFISCATIONS Number 561 TOTAL RECEIPTS FROM JULY 1, 1925 Nonresident fishing licenses Great Lakes fishing licenses Mississippi River fishing licenses Fish shipping coupons Rough fish Resident hunting licenses Nonresident hunting licenses Duplicate licenses Settler's hunting licenses	fees \$1,588.40	1mposed \$45,500.00 Sold for \$7,727.73 30, 1926 \$161,873.70 7,502.75 3,212.25 6,414.00 47,113.75 148,596.75 9,900.00 179.50
CONFISCATIONS Number 561 TOTAL RECEIPTS FROM JULY 1, 1925 Nonresident fishing licenses Great Lakes fishing licenses Mississippi River fishing licenses Fish shipping coupons Rough fish Resident hunting licenses Nonresident hunting licenses Duplicate licenses Settler's hunting licenses	fees \$1,588.40	1mposed \$45,500.00 Sold for \$7,727.73 30, 1926 \$161,873.70 7,502.75 3,212.25 6,414.00 47,113.75 148,596.75 9,900.00 179.50
CONFISCATIONS Number 561 TOTAL RECEIPTS FROM JULY 1, 1925 Nonresident fishing licenses Great Lakes fishing licenses. Mississippi River fishing licenses. Fish shipping coupons Rough fish Resident hunting licenses Nonresident hunting licenses Duplicate licenses Settler's hunting licenses Confiscations Warden fees	fees \$1,588.40	1mposed \$45,500.00 Sold for \$7,727.73 30, 1926 \$161,873.70 7,502.75 3,212.25 6,414.00 47,113.75 9,900.00 179.50 128.00 7,727.73
CONFISCATIONS Number 561 TOTAL RECEIPTS FROM JULY 1, 1928 Nonresident fishing licenses Great Lakes fishing licenses Mississippi River fishing licenses. Fish shipping coupons Rough fish Resident hunting licenses Nonresident hunting licenses Duplicate licenses Settler's hunting licenses Confiscations Warden fees Trapping licenses Set line licenses Set line licenses Set line licenses	\$1,588.40	1mposed \$45,500.00 Sold for \$7,727.73 30, 1926 \$161,873.70 7,502.75 3,212.25 6,414.00 47,113.75 148,596.75 9,900.00 179.50 128.00 7,727.73 1,588.40 18,043.50 18,043.50
CONFISCATIONS Number 561 TOTAL RECEIPTS FROM JULY 1, 1925 Nonresident fishing licenses Great Lakes fishing licenses. Mississippi River fishing licenses. Fish shipping coupons Rough fish Resident hunting licenses Duplicate licenses Duplicate licenses Settler's hunting licenses Settler's hunting licenses Confiscations Warden fees Trapping licenses Set line licenses Set line licenses Guide licenses	fees \$1,588.40	Sold for \$7,727.73 30, 1926 \$161,873.70 7,502.75 3,212.25 6,414.00 47,113.75 148,596.75 9,900.00 179.50 128.00 7,727.73 1,564.55 1,564.55
CONFISCATIONS Number 561 TOTAL RECEIPTS FROM JULY 1, 1926 Nonresident fishing licenses Great Lakes fishing licenses Mississippi River fishing licenses Fish shipping coupons Rough fish Resident hunting licenses Nonresident hunting licenses Duplicate licenses Settler's hunting licenses Confiscations Warden fees Trapping licenses Set line licenses Guide licenses Guide licenses Guide licenses Deer tags	fees \$1,588.40	1mposed \$45,500.00 Sold for \$7,727.73 30, 1926 \$161,873.70 7,502.75 3,212.25 6,414.00 47,113.75 148,596.75 9,900.00 179.50 179.50 179.50 1,588.40 1,568.40 1,568.40 1,564.55 1,564.55
CONFISCATIONS Number 561 TOTAL RECEIPTS FROM JULY 1, 1925 Nonresident fishing licenses Great Lakes fishing licenses Mississippi River fishing licenses Fish shipping coupons Rough fish Resident hunting licenses Nonresident hunting licenses Duplicate licenses Settler's hunting licenses Confiscations Warden fees Trapping licenses Set line licenses Set line licenses Guide licenses Guide licenses Deer tags Trap tags Fish dealer's licenses	fees \$1,588.40	\$45,500.00 Sold for \$7,727.73 30, 1926 \$161,873.70 7,502.75 3,212.25 6,414.00 47,113.75 148,596.75 9,900.00 179.50 128.00 7,727.73 1,588.40 1,564.55 449.90 927.40 17,181.30 1,150.00
CONFISCATIONS Number 561 TOTAL RECEIPTS FROM JULY 1, 1928 Nonresident fishing licenses Great Lakes fishing licenses Mesissippi River fishing licenses Fish shipping coupons Rough fish Resident hunting licenses Nonresident hunting licenses Settler's hunting licenses Settler's hunting licenses Confiscations Warden fees Trapping licenses Set line licenses Guide licenses Deer tags Trap tags Fish dealer's licenses Clamming licenses Clamming licenses Clamming licenses Clamming licenses Clamming licenses	fees \$1,588.40	1mposed \$45,500.00 Sold for \$7,727.73 30, 1926 \$161,873.70 7,502.75 3,212.25 6,414.00 47,113.75 148,596.75 9,900.00 179.50 128.00 7,727.73 1,588.40 1,564.55 449.00 927.40 17,150.00
CONFISCATIONS Number 561 TOTAL RECEIPTS FROM JULY 1, 1928 Nonresident fishing licenses Great Lakes fishing licenses Mesissippi River fishing licenses Fish shipping coupons Rough fish Resident hunting licenses Nonresident hunting licenses Settler's hunting licenses Settler's hunting licenses Confiscations Warden fees Trapping licenses Set line licenses Guide licenses Deer tags Trap tags Fish dealer's licenses Clamming licenses Clamming licenses Clamming licenses Clamming licenses Clamming licenses	fees \$1,588.40	1mposed \$45,500.00 Sold for \$7,727.73 30, 1926 \$161,873.70 7,502.75 3,212.25 6,414.00 47,113.75 148,596.75 9,900.00 179.50 128.00 7,727.73 1,588.40 1,564.55 449.00 927.40 17,150.00
CONFISCATIONS Number 561 TOTAL RECEIPTS FROM JULY 1, 1928 Nonresident fishing licenses Great Lakes fishing licenses Mississippi River fishing licenses Fish shipping coupons Rough fish Resident hunting licenses Nonresident hunting licenses Duplicate licenses Settler's hunting licenses Confiscations Warden fees Trapping licenses Set line licenses Guide licenses Guide licenses Deer tags Fish dealer's licenses Clamming licenses Clamming licenses Clamming licenses Park leases and concessions Island leases and nursery stock	fees \$1,588.40	1mposed \$45,500.00 Sold for \$7,727.73 30, 1926 \$161,873.70 7,502.75 2,212.25 6,414.00 47,113.75 148,596.75 9,900.00 179.50 128.00 7,727.73 1,588.40 1,564.55 449.00 927.40 17,181.30 1,150.00 975.00 17,181.30 1,180.00 17,181.30 1,180.00 975.00 3,503.30
CONFISCATIONS Number 561 TOTAL RECEIPTS FROM JULY 1, 1928 Nonresident fishing licenses Great Lakes fishing licenses Mississippi River fishing licenses Fish shipping coupons Rough fish Resident hunting licenses Nonresident hunting licenses Duplicate licenses Settler's hunting licenses Confiscations Warden fees Trapping licenses Set line licenses Guide licenses Guide licenses Clamming licenses Clamming licenses Clamming licenses Clamming licenses Lish dealer's licenses Clamming licenses Lish dealer's licenses Clamming licenses Lish dealer's licenses Clamming licenses Lish dealer's licenses Clamming licenses Lish dealer's licenses Clamming licenses Decov bands	fees \$1,588.40	1mposed \$45,500.00 Sold for \$7,727.73 30, 1926 \$161,873.70 7,502.75 3,212.25 6,414.00 47,113.75 148,596.75 9,900.00 179.50 1,28.00 7,727.73 1,588.40 1,564.55 449.00 975.00 17,181.30 1,1564.55 1,564.55 1,564.55 1,564.55 1,564.55
CONFISCATIONS Number 561 TOTAL RECEIPTS FROM JULY 1, 1928 Nonresident fishing licenses Great Lakes fishing licenses Mississippi River fishing licenses Fish shipping coupons Rough fish Resident hunting licenses Nonresident hunting licenses Duplicate licenses Settler's hunting licenses Confiscations Warden fees Trapping licenses Set line licenses Guide licenses Guide licenses Clamming licenses Clamming licenses Clamming licenses Clamming licenses Lish dealer's licenses Clamming licenses Lish dealer's licenses Clamming licenses Lish dealer's licenses Clamming licenses Lish dealer's licenses Clamming licenses Lish dealer's licenses Clamming licenses Decov bands	fees \$1,588.40	1mposed \$45,500.00 Sold for \$7,727.73 30, 1926 \$161,873.70 7,502.75 3,212.25 6,414.00 47,113.75 148,596.75 9,900.00 179.50 1,28.00 7,727.73 1,588.40 1,564.55 449.00 975.00 17,181.30 1,1564.55 1,564.55 1,564.55 1,564.55 1,564.55
CONFISCATIONS Number 561 TOTAL RECEIPTS FROM JULY 1, 1928 Nonresident fishing licenses Great Lakes fishing licenses Mississippi River fishing licenses Fish shipping coupons Rough fish Resident hunting licenses Nonresident hunting licenses Souther's hunting licenses Settler's hunting licenses Confiscations Warden fees Trapping licenses Set line licenses Guide licenses Guide licenses Deer tags Trap tags Fish dealer's licenses Clamming licenses Clamming licenses Park leases and concessions Island leases and nursery stock. Miscellaneous	fees \$1,588.40	1mposed \$45,500.00 Sold for \$7,727.73 30, 1926 \$161,873.70 7,502.75 3,212.25 6,414.00 47,113.75 148,596.75 9,900.00 179.50 128.00 7,727.73 1,588.40 1,564.55 449.00 17,181.30 1,150.00 17,181.30 1,150.00 975.00 5,107.20 3,503.31 1,500.69

MEMORANDUM IN CONNECTION WITH STATE TIMBER INVENTORY

The state timber inventory printed herewith was arrived at as follows:

Several men in the employ of the Conservation Commission who were familiar with general forest conditions of the state consulted with lumbermen, cruisers, assessors and others having a firsthand knowledge of timber conditions in the respective counties and made an effort to systematically cover each township by forty acre tracts, if possible, or at least by sections. These estimates were subsequently checked up, as far as possible, from office records of companies or individuals interviewed. The estimates were then summarized by townships, and blue prints of the respective species and amounts made for each township.

There was added to these township figures a general raise in the estimates of from 5 to 50%, depending upon conditions, to take care of the many small bunches of timber scattered here and there in each county that could not be otherwise satisfactorily accounted for, and to make corrections for the general tendency to overestimate in the preparation of such an inventory, these township figures were then referred to from two to five men familiar with timber conditions in each county and this review constituted the basis of final county figures.

It was found that many of the preliminary estimates had been low. In round numbers the first figures summarized by townships showed about nine billion feet of merchantable timber. The corrected figures based on the general raise and interview of township figures showed about 12½ billion feet, and it will be seen from the final inventory sheet, after accounting for the saw-mill overrun, that there is at least sufficient saw-log material in the state to produce 15½ billion feet of lumber, as of January 1, 1923.

In addition to the saw-log supplies, there were indicated on the reports received large quantities of forest supplies in the form of pulp wood, poles, ties, etc., and these figures are itemized in the summary. The estimates on pulp wood, given in cords, include principally jack pine, spruce and poplar, although they undoubtedly include a considerable quantity of hemlock also, but most of the hemlock is accounted for in the board foot column, although it is readily understood that a great quantity of this hemlock will really be utilized in pulp and paper mills, and to obtain a correct understanding of the available pulp wood supplies of the state, suitable conversion figures must be applied.

These tables include only those counties having a merchantable stand of 30 million board feet or more per county. There are considerable quantities of forest products in the remaining forty-six counties mostly on farm wood lots which will provide great quantities

DO FEET B. M. OR MORE ARE LISTED

	l	1	Cords		Total Area in	Approximate Acres in	Average stand
ixed iwood	Total	% per County	Pulpwood	Fuelwood	Acres	Timber	Per Acre
1,500	767 ,272	6.15	XXX	1 ,250 ,000	692 ,480	109,610	7,000
KX	71 ,604	. 57	40 ,000	1 ,250 ,000	566 ,400	14 ,820	5 ,000
54,380	490 ,529	3 9	180 ,610	3 ,500 .000	961 ,920	49 ,000	10,000
83 ,00 0	41 ,750	. 83	606 ,400	500 ,000	550 ,400	18 ,900	3 ,000
2 ,000	84 ,800	. 28	XX	2 ,800 ,000	779 ,520	8 ,700	4 ,000
26 ,040	89 ,185	.71	218 ,400	447 ,500	855 ,680	17 ,830	5 ,000
XXX	506 ,759	4 06	XXX	1 ,000 ,000	818 ,080	63 ,845	8 ,000
Fuel	2 ,152 ,188	17 27	XXX	8 ,250 ,000	650 ,880	269 ,023	8 ,000
11,480	1 ,860 ,930	14.9	XXX	2 ,000 ,000	506 ,880	177 ,063	7 ,000
XXX	809,909	6 5	XXX	1 ,680 ,000	560 ,000	101 ,237	8 ,000
8 ,044	1 ,090 ,894	8.74	XXX	750 ,000	577 ,280	154 ,411	7 ,000
5 ,000	102 ,000	.91	xx	2 ,000 ,000	994 ,560	20 ,400	5 ,000
жx	264 ,990	2.12	217 ,075	2 ,190 ,850	905 ,600	87 ,856	7 ,000
xx	289 ,450	2.32	84 ,047	1 ,430 ,000	715 ,520	41 ,350	7 ,000
xx	211 ,887	1.7	XXX	1 ,500 ,000	757 ,120	80,800	7 ,000
13 ,500	86 ,9 6 6	. 68	52 ,700	750 ,000	598 ,400	17 ,393	5 ,000
1 ,860	367 ,053	2.94	XXX	2 ,400 ,000	818 ,560	61 ,177	6 ,000
Fuel	71 ,113	57	хx	1 ,596 ,000	877 ,600	14 ,228	5 ,000
XX	219,100	1 75	XXX	1 ,184 ,000	592 ,000	36 ,516	6 ,000
XXX	897 ,429	7.2	1 ,500 ,000	3 ,000 ,000	844 ,800	128 ,204	7 ,000
XXX	1 ,382 ,371	11 09	450 ,206	2 ,941 ,400	741 ,120	173 ,196	8 ,000
217	129 ,986	1 04	XXX	1 ,000 ,000	634 ,240	18 ,570	7 ,000
	30,00 0	. 24	ХX	2 ,000 ,000	525 ,440	7 ,500	· 4 ,000
	428 ,672	3.44	xxx.	1 ,200 ,000	597 ,760	61 ,238	7 ,000
40 ,320	73 ,870	. 59	290 ,280	500 ,000	534 ,400	18 ,470	4 ,000
97 ,291	12,460,917	100 00	3 ,634 ,718	41 ,619 ,250	16,655,640	1 ,545 ,640	
165,6 67	15 ,326 ,920						
: 38							

Compiled by Wisconsin Conservation Commission

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of fuel wood, short bolt material for various uses and even considerable quantities of saw-logs, but these supplies are for the most part chiefly of local rather than general importance.

The twenty-five counties listed contain primarily the commercial timber supplies of the state.

It is felt that this inventory is sufficiently comprehensive and complete to furnish a sound basis for any calculations relating to the forest problem in the state. The figures on saw-log timber are particularly representative of the real situation.

The Commission made an earnest effort to show all there really was in the way of timber supplies and try particularly not to err on the side of an over-estimate.



The Lookout at the Peninsula State Park

DISTRIBUTION BY HATCHERIES, 1925

		Total Variety from each Hatchery	Total Number from each Hatchery
Madison Hatchery Brown trout fingerling No. 1 Rainbow trout fingerling No. 1 Rainbow trout fingerling No. 3 Wall-eyed pike fry	156,000 300,000 4,800 14,480,000	304,800	14,940,800
Brook trout fingerling No. 1 Brook trout fingerling No. 2 Brown trout fingerling No. 1	1,512,900 615,000 1,496,400 795,000	2,127,900	
Silver trout fry Silver trout fingerling No. 2 Lake trout fry Salmon fry Miscellaneous	117,500 6,853,700 270,000 5,928	912,500	44 400 400
_			11,666,428
Wild Rose Hatchery Brown trout fingerling No. 1 Rainbow trout fingerling No. 1	108,000 865,000		973,000
St. Croix Falls Hatchery Brook trout fingerling No. 4 Brown trout fingerling No. 4 Rainbow trout fingerling No. 2 Rainbow trout fingerling No. 3	1,717,900 318,500 106,000 107,800	213,800	2,2 50, 2 00
Westfield Hatchery Brook trout fingerling No. 2 Brown trout fingerling No. 2	290,500 196,800		487,300
Lakewood Hatchery Brook trout fingerling No. 2			280,800
Hayward Hatchery Brook trout fingerling No. 2			382,000
Minocqua Hatchery Wall-eyed pike fry Black bass fry Muskellunge	42,274,000 348,000 270,000		43,893,000
Daiafield Hatchery Wall-eyed pike fry Black bass fingerling No. 1	10,963,000		
Wall-eyed pike fry Black bass fingerling No. 1 Sunfish and roach	240,000		11,618,000
Eagle River Hatchery Wall-eyed pike fry			38,376,000
Spooner Hatchery Wall-eyed pike fry			21,480,000
Sturgeon Bay Hatchery Lake trout fry			8,942,000
Sheboygan Hatchery Lake trout fry White fish fry Cisco fry	5,632,000 5,200,000 2,300,000		13,132,000
Gills Landing			
Black bass fingerling No. 2			87,000

	Total Variety from each Hatchery	Total Number from each Hatchery
Miscellaneous fish distributed 135,750 Miscell'n'ous fish returned to river 3,500,000 Miscellaneous bull heads No. 3 21,200		
		3,656,950
Necessh Perch and white bass		3,938,000
DISTRIBUTION OF FISH BY SP	ECIES 10	or .
DISTRIBUTION OF FISH BY SP	ECIES, 13	23
Brook trout fingerling No. 1	1,512,900 1,568,300	
Brook trout fingerling No. 2	1,717,900	4,799,100
Brown trout fingerling No. 1	1,760,400	4,133.100
Brown trout fingerling No. 1	196,800 318,500	
Brown trout ingering No. 1	310,000	2,275,700
Rainbow trout fingerling No. 1	1,165,000	
Rainbow trout fingerling No. 2	106,000 112,600	
		1,383,600
Wall-eyed pike		127,572,000
Black bass fry Black bass fingerling No. 1 Black bass fingerling No. 2	348,000 411,000 87,000	846,000
Muskellunge		270,000
Lake trout fry		21.427,700
Silver trout fry	795,000	21,121,100
Silver trout fingerling No. 2	117,500	912,500
White fich for		5,200,000
White fish fry		270,000
Salmon fry		•
Cisco fry		2,300,000
Sunfish and roach		240,000
Perch and white bass		3,938,000
Miscellaneous		3,641,678
Miscellaneous bull heads No. 3	_	21,200
		175,097,478

DISTRIBUTION BY HATCHERIES, 1926

		Total Variety from each Hatchery	Total Number From each Hatchery
Madison Hatchery Brown trout fingerling No. 1 Miscellaneous	342,500 120		948 600
			842,620
Bayfield Hatchery Brook trout fingerling No. 1	289,800		
Brook trout fingerling No. 2 Brown trout fingerling No. 1	289,800 1,407,600 844,800	1,697,400	
Brown trout fingerling No. 2	844,000 8,561,355	1,188,800	
Brook trout fingerling No. 1 Brook trout fingerling No. 2 Brown trout fingerling No. 1 Brown trout fingerling No. 2 Lake trout fry Salmon fry	285,000		6,732,555
			0,182,000
Wild Rose Hatchery Brown trout fingerling No. 1	232,800		
Brown trout fingerling No. 1 Brown trout fingerling No. 2 Rainbow trout fingerling No. 1 Rainbow trout fingerling No. 2 Rainbow trout fingerling No. 3	244,000 168,000 287,000	476,800	
Rainbow trout fingerling No. 2	287,000	501,400	
Rambow trout inigering No. 3	46,400	301,400	978,200
St. Croix Falls Hatchery			
Brook trout fingerling No. 1 Brook trout fingerling No. 2 Brook trout fingerling No. 3 Brook trout fingerling No. 4 Brown trout fingerling No. 2 Rainbow trout fingerling No. 1 Rainbow trout fingerling No. 1 Rainbow trout fingerling No. 2 Rainbow trout fingerling No. 4 Rainbow trout fingerling No. 4 Rainbow trout yearling No. 4	1,191,600 1,693,125		
Brook trout fingerling No. 3	737,200	4,225,725	
Brown trout fingerling No. 2	179,200	4,220,120	
Rainbow trout fingerling No. 1 Rainbow trout fingerling No. 2	97,500 9.200		
Rainbow trout fingerling No. 4	54,000 400	161,100	
		202,200	4,566,025
Osceola Hatchery			
Brook trout fingerling No. 2 Brook trout fingerling No. 3 Brook trout fingerling No. 4	964,800 335,300		
Brook trout fingerling No. 4	39,375		1.339,475
Westfold Wetchery			2,000,111
Westfield Hatchery Brook trout fingerling No. 1 Brown trout fingerling No. 1	168,525		
Brown trout fingerling No. 1	800,750		469,275
Lakewood Hatchery			
Brook trout fingerling No. 1			875,700
Hayward Hatchery	99 000		
Brook trout fingerling No. 2 Brown trout fingerling No. 3	112,000		440.000
			140,000
Wisconsin Rapids Hatchery Rainbow trout fingerling No. 3			198,000
Wall-eyed pike fry	81,494,000		
Minocqua Hatchery Wall-eyed pike fry Black bass fry Muskellunge	1,697		
			31,657,697
Delafield Hatchery Wall-eved nike fry	21.571.000		
Wall-eyed pike fry	344,000	410 500	
Black bass ingering No. 2	65,500	419,500	21,980,500
Eagle River Hatchery			
Wall-eyed pike fry			32,108,000
Spooner Hatchery Wall-eyed pike fry			13.950,000
watt-ojeu pine ity			10,000,000

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	Total Variety from each Hatchery	Total Number From each Hatchery
Tenney Park Hatchery Wall-eyed pike fry		15,264,000
Sturgeon Bay Hatchery Lake trout fry planted 12,000,000 White fish fry 2,000,000		14,000,000
Sheboygan Hatchery 2,300,000 Whitefish fry 9,544,000 Lake trout fry 9,544,000		11,844,000
Gills Landing Pickerel fingerling No. 3		86,775
Mississippi River Miscellaneous fish distributed 259,925 Miscellaneous fish ret'r'd to river 10,250,000		10,509,925
Neemah Perch and white bass		569,450
DISTRIBUTION OF FISH BY SPI	ECIES, 192	6
Brook trout fingerling No. 1	2,025,625 4,093,525 1,072,500 643,175	7 994 995
Brown trout fingerling No. 1	1,720,850 767,200 112.000	7,834,825 2,600,050
Rainbow trout fingerling No. 1	265,500 296,200 244,400 54,000 400	860,500
Wall-eyed pike fry		114,387,000
Black bass fry	162,000 344,000 65,500	
		571,500
Pickerel fingerling No. 3		86,775 1,697
Lake trout fry		25,105,355
White fish fry		4,800,000
Salmon fry		285,000
Perch and white bass		569,450
Miscellaneous		10,510,045
	•	167,112,197

TREES SHIPPED FROM TROUT LAKE NURSERY IN 1925

Species	For Private Plantings	For State Plantings
White Pine	111,060	67,500
Norway Pine	31,325	29,000
Jack Pine	39,250	15,500
Scotch Pine	84 ,527	48 .500
White Spruce	28 .081	
Norway Spruce	36 .183	İ. .
Blue Spruce	11.528	
Arbor Vitae	6,000	
White Elm	1 .823	200
White Ash	61	
Basswood	700	
Totals	350 .538	160 .700
Grand Total		511 .238

TREES SHIPPED FROM TROUT LAKE NURSERY IN 1926

Species	For Private Plantings	For State Plantings
Scotch Pine	47,700	
Norway Pine	242 .150	419 .500
White Pine	223 250	
Jack Pine		4,700
Norway Spruce	169,940	
White Spruce	46,180	
White Elm	14,835	
White Ash	5,105	
Black AshBlack Ash	585	
Red Oak	4 ,100	
Totals	753 ,845	424 ,200 1 ,178 ,045

SUMMARY OF FOREST, MARSH AND SWAMP FIRES DURING 1924, AS REPORTED BY 438 TOWN CHAIR-MEN OUT OF 544 NORTHERN COUNTIES

248 fires were reported as having burned over 76,466 acres. Nine counties out of 28 from which reports were received had 80% of the fires reported.

In addition to the 984 men employed on these fires 407 others volunteered.

The total damage listed was \$29,056.00 which does not include young growth, damage to wild life and other indirect losses. It cost the towns \$5,222.80 for fire fighting bills.

Name of County	No. of Fires	Percent- age	Damage	Cost	No. Men Employed	Acres Burned
Adams	3	1.2	\$220.00	\$59.10	30	360
Ashland	4	1.6		47.60	10	160
BarronBavfield	83	13.3	550.00	269.60	35	3 .600
Burnett	29	11.7	800.00	383.55	87	18 .337
Chippewa	1	0.4				60
Clark	.0					
Douglas	28 3	11.3 1.2	200.00	417.66 132.50	42 32	5,183 47
Forest	22	8.9	200.00	2.058.99	291	21 ,218
iron	3	1.2	300.00	131.92	30	131
Jackson						
Juneau	1	0.4				-
Langlade Lincoln	3 5 6	1.2 2.0	2,000.00	32.50 37.60	15	203 324
Marathon	š	2.4	500.00	10.00	3	63
Marinette	22	8.9	406.00	245.25	68	6.190
Oconto	5.	2.0	950.00	13.10	10	517
Oneida	8 · 3	3.3 1.2	950.00	146.80	40	66
Portage Price	3 1	1.2	350.00	10.55 1.00	7	1 .800
Rusk	ĩ	0.4		39.00	1	200
Sawyer	2 2	0.8		55.55	19	6,900
Shawano	2	0.8	100.00	14.75	7	58
Taylor	31	0.4 12.5	20,630.00	3.00	1 000	300
Vilas Washburn	26	10.5	1,100.00	941.94 170.84	208 41	4 ,649 4 .440
Wood	5	2.0		210.04		494
Total	248	100.0	\$29,056.00	\$5,222,80	984	76 ,466

Causes of Fires	No.	Percent- age	Fires by Months	No.	Percent- age
Lightning	22	0.0 8.9	April	2 65	0.8 26.2
Land Clearing Logging	83 4	33.5 1.6	June July	30 5	12.3 2.0
Camp Fires	21 29	8.5 11.7	August September	2 9	0.8 3.6
Incendiary	1 1 87	0.4 0.4 85.0	November	39 9	15.7 3.6
Unknown	248	100.0	No record	248	35.0 100.0

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SUMMARY OF FOREST AND MARSH FIRES FOR THE YEAR 1925 AS REPORTED BY DISTRICT FOREST RANGERS AND TOWN CHAIRMEN

During the year 415 fires burned over 355,584 acres, causing a reported damage of \$702,843.00. During the spring months of this year a severe and prolonged dry spell occurred in the state, resulting in an unusual number and relatively large forest fires. Extreme measures, including the ordering out of several companies of the National Guard by the governor, were taken to control the fires that broke out in many of the northern counties. The average fire burned over 666 acres, and resulted in damage of \$1,310.00.

District	No. of Fires	% of Fires	Acres Burned	Damage
1	57 98 63 101 49 47	10.6 18.4 11.8 18.9 9.2 8.8	17 515 21 ,872 23 ,328 161 ,949 43 ,335 5 ,085	\$14,199.00 48,970.00 15,156.00 299,477.00 5,640.00 20,118.00
Total	415 119 534	22.3 100%	273 ,084 82 ,500 355 ,584	\$403 ,560 . 00 299 ,283 . 00 702 ,834 . 00

FIRES BY CAUSES

District	Light- ning	R.R.	Clear- ing	Log- ging	Camp- fire	Smok- ers	Incend- iary	Misc.	Un- known
1 2 3 4 5 6	2 1 1 0 0	15 6 24 23 3 3	10 37 7 23 0	0 1 0 13 2 0	0 2 7 1 5 6	13 13 5 4 8 8	1 0 1 0 1	3 0 0 1 0	13 38 18 36 30 14
Total	4	74	98	16	21	51	8	4	149
%	10	17.8	22.4	3.8	5.1	12.3	0.7	1.0	35.9

FIRES BY MONTHS

District	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
1 2 3 4 5 6	0 3 0 1 0	24 50 12 28 25 7	28 36 32 68 22 25	2 2 1 0 0	1 0 10 4 2	1 6 3 0 0	1 0 0 0 0	0 0 0 0	0 1 0 0 0
Total	4	146	211	5	17	80	1	0	1
%	1.0	50.9	35.2	1.2	4.1	7.2	0.2	0	0.2

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FIRES BY AREA CLASSES

	A	В	C	D	E
District	Under ¼ acre	1/4 to 10 acres	11 to 100 acres	101-1000 acres	Over 1000 acres
1	1	17 28	17	18 17	4.
3	3	19	22	16	3
56	0	0 13	13 14 20	47 26 14	89 9 0
Total	10	79	126	182	62
%	2.4	19.0	30.4	33.2	15.0

BIENNIAL REPORT

OF THE

STATE CONSERVATION COMMISSION

OF WISCONSIN

FOR THE

Fiscal Years Ending June 30, 1927, and June 30, 1928



Madison, Wisconsin 1928

THE CONSERVATION COMMISSION

L. B. NAGLER Conservation Director

COMMISSIONERS

WILLIAM MAUTHE, Chairman Fond du Lac

HASKELL NOYES, Milwaukee

O. C. LEMKE, Wausau

A. W. ICKS, Green Bay

F. L. GILBERT, Madison

- E. M. DAHLBERG, Secretary Ladysmith
- C. L. HARRINGTON
 Superintendent of Forests
 and Parks
- B. O. WEBSTER
 Superintendent of Fisheries

MATT. PATTERSON
Assistant to Director

- H. W. MAC KENZIE, Antigo Chief Warden
- W. B. GRANGE
 Superintendent of Game
- D. H. KIPP
 Superintendent of Education
 and Publications

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5-2-1929

LETTER OF TRANSMITTAL

HONORABLE WALTER J. KOHLER, Governor of Wisconsin.

SIR: Agreeable to the provisions of law, we herewith submit a biennial report of the activities of the Conservation Commission of the State of Wisconsin; and trust that it will meet with your approval.

Respectfully submitted by

The State Conservation Commission,

WILLIAM MAUTHE, Chairman,

E. M. DAHLBERG, Secretary.



Delles of the St. Croix Interstate Park.

FOREWORD

As the 1926-1927 biennium draws to a close, the conservation program in Wisconsin can truthfully be said to be further advanced than it has ever been in the long history of this work in Wisconsin. Conservation in Wisconsin today is more than sentimentality; it is more than an idealistic gesture. Conservation in Wisconsin today means more than just propagating and planting pheasants and fish to satisfy the predatory instincts of hunters and fishermen. Conservation means more than the preservation of beauty spots and the stocking of trout streams and bass pools to attract tourists. Conservation today means the restoration of our marshes and the creation of conditions under which forests will grow and be grown. It means bringing into being not only refuges for wild life, but also new storehouses of raw materials for industry, that Wisconsin may retain its high standards of living and levels of prosperity that rightfully belong to her citizens.

The last biennium has seen progress in all of the different departments of the conservation commission. At the beginning of the biennium there were three separate divisions of the work of the conservation commission, the department of forests and parks, the department of fisheries, and the department of law enforcement. Each of these has been developed and enlarged, and the commission has also undertaken four new branches of activity, two of which have been incorporated into regular departments, and the other two of which function as extra curricular endeavors.

Forestry

To the state conservation commission of Wisconsin, the basis of all conservation work lies in forestry and reforestation. Without forests there can be none of the lumbering nor woodworking industries which have always been prominent in Wisconsin. Without forests the condition of our lakes and streams would become such that they would not harbor the fish and other aquatic life which makes Wisconsin famous throughout the country. Without forests to provide cover, our game would dwindle away to the point where there would be no more hunting. Forests also provide the beauty spots, recreation centers, and wonderful scenery which annually attract millions of tourists into the state.

Realizing that the greatest enemy of our forests is the forest fire, the work of the commission during the past two years has been largely directed to the development and perfecting of an adequate forest protection system. Today there are eleven fire districts, each of which contains from 800,000 to 1,500,000 acres, and each of which is so situated that it protects a section of the state in which forest fire hazard is great. A forest ranger is in charge of each of these districts, and a system of lookouts with telephone communications between them has been established. Each district is adequately supplied with fire fighting equipment, and an organization of subsidiary fire fighters has been built up so that at a moment's call a large body of trained men can be called upon to combat the greatest menace to our forests.

The problem of reforestation has been attacked from two different angles. The commission's mammoth nursery, which is at Trout Lake, in Northern Forest Park, Vilas County, has had its capacity more than doubled during this Today the nursery can and does contain past biennium. approximately 12,000,000 growing trees, and Wisconsin stands sixth among the states in nursery operations. More than 2.000.000 trees were distributed this last year to be used for reforestation purposes only in Wisconsin, and approximately 1,000,000 trees were sold by the commission to private individuals for shipment all over the state. shipments from the nursery today go to the people who sign an agreement to use the trees not for ornaments but for reforestation. The nursery is operated entirely on a cost basis.

The last legislature took a tremendous forward step in reforestation when it passed the new forest crop law, which is making it possible for the millions of idle acres of Wis-

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consin's north land to be again put into use. Fundamentally, this new law makes it possible for the State of Wisconsin to enter into a partnership with private individuals or companies owning large tracts of cut-over lands to raise a forest crop upon these lands without being burdened by excessive taxes. Counties as well as individuals may register land under the forest crop tax law. Many thousands of acres of land, now tax delinquent, could be registered by counties to their advantage.

The State of Wisconsin in return for the amount of money expends in taxes will receive a percentage return from the stumpage value of these lands when the forest crop will be harvested in the future. More than 160,000 acres of Wisconsin's cut-over lands were entered under the provisions of this new law during its first year of operation. Expert foresters throughout the country acclaim this new law as the most forward looking piece of forest land tax legislation ever enacted by an American legislature.

State Parks

In the regulation of state parks the new commission has inaugurated a policy of refusing to tolerate anything which will materially lessen the natural beauty of any state park or the enjoyment of the beauties that are there by students and lovers of nature. The commission believes that one of the best reasons for establishing and maintaining state parks is that every such tract becomes a conservation area where nature is allowed to regulate her own affairs without the interference of man. It is the intent of the commission that every area designated in Wisconsin as a state park shall remain forever an object lesson in conservation to the millions of people who enjoy these parks every year. Native flowers, shrubs, and trees, song birds, game birds, and wild game are safe in our state parks. The commission has taken pains to improve the sanitary conditions and the educational aspects in all the state parks, and they are all in better condition than ever before.

Wisconsin now has twelve regularly organized state parks, and the commission is doing all in its power to secure for another park the Copper Falls region, as authorized by the legislature. This combination of waterfalls and gor-

geous scenery in a small area makes this site most attractive and highly desirable as a state park; when the tract is secured the state will have a park entirely different from any of its other properties.

Work is going forward to secure several other areas which will become units in the state park program of Wisconsin.

One of these, Government Bluff, in Door County, between Green Bay and Sturgeon Bay, has been purchased from the War Department, with the small remaining balance in the parks purchase fund. The other two projects, the Northern Lakes region and the Kettle Moraine region, into which the commission is investigating, were both considered by the last legislature. Parks in these two areas will be highly desirable units of the state park system.

Fisheries

More scientific study and businesslike precision has characterized the propagation and distribution of fish during the past biennium. It is the intention of the department of fisheries not only to increase the numbers of fish raised and distributed by the state, but to so improve the quality of fish shipments that there will be a smaller mortality rate among the fish planted in Wisconsin lakes and streams. With this idea in mind, the department of fisheries has been distributing larger fish, which are hardier and which have a better chance of surviving after being planted in Wisconsin waters than have the smaller fry or fingerlings that have been planted in years heretofore.

The magnitude of the work of the department of fisheries can be realized when it is understood that last year more than 289,000,000 fish were distributed to Wisconsin waters. These fish included all of the more desirable game fishes, pike, trout, both lake and stream, bass, pickerel, muskellunge, whitefish, perch, etc. Each different kind of fish was planted in the Wisconsin waters which had been previously determined by scientific study to be best adapted for that particular kind of fish. Distribution work is carried on by the machinery of the fisheries department, which includes two large specially constructed automobile trucks, and an extra length railroad car, also specially constructed

to handle fish shipments. The Chicago and Northwestern railroad has cooperated with the department by furnishing free of charge the baggage cars to speed up the distribution work. In each different locality sportsmen or other interested individuals take care to see that the fish are properly planted.

To secure information as to how fish shipments have been handled in the past so that the distribution of fish in the future can be better regulated, the department of fisheries hired a field investigator to check up on this year's distribution. In his report the investigator tells of the conditions as he found them all over the state. It is thought that such an investigation will obviate the possibility of shipments going to improper persons or being poorly handled after receipt. The investigator also serves as a teacher of proper fish planting methods.

Commercial fishing and the removal of rough fish from lakes and streams also comes under the direction of the department of fisheries. A great deal of progress has been made in each of these two branches of endeavor particularly in the work of rough fish removal. The new commission has established a definite policy in regard to rough fishing, which prohibits the giving of exclusive contracts to any one fisherman, nor can any fisherman receive a contract for a longer period than one year. The commission believes that this new policy will lessen the danger of commercial fishermen profiteering unfairly upon the state, and certainly the results obtained from rough fishing during the past year have proven very satisfactory.

Law Enforcement

It is in the law enforcement phase of conservation work that the commission has made one of its greatest steps forward. A larger force of better trained wardens is in the field today than there has ever been before in the history of the state. Warden work is carried on today in an intelligent and fearless manner, and the results accomplished by this division have been more than satisfactory in the last biennium. In the second year of the biennium the warden force made the greatest number of arrests and convictions that have ever been made in a similar period of time. These

numbered 1513, a figure which will compare very favorably with the results obtained by the warden force of any state in the Union. Fines from the arrests made by the wardens during this second year of the biennium netted the school fund approximately. \$54,000, and the sale of goods confiscated from law violators by the wardens brought nearly \$15,000 into the conservation fund.

Today the officials of the conservation commission feel proud of the warden force, and believe that while there is still room for improvement in some of the territories, all of them are being brought up to a high standard, and in the main the conservation wardens of Wisconsin are on the job and getting results. The commission's policy in seeking to prevent violations rather than to punish violators is working out very satisfactorily. Education by dissemination of conservation rulings and laws, warning by the conservation wardens by word of mouth and public statement, and their known and advertised presence in the communities as uniformed officers of the law are having an excellent effect. The commission believes that uniforming the men of the field force has had a decided deterrent effect upon law violators, and it has also had a good effect on the wardens wearing the uniforms. Today the conservation warden force in Wisconsin is a conscientious group of men, working for the best interests of conservation for the people of the state.

The day is long past when a recommendation from a "higher up" was sufficient to create a new game warden job for some friend or political henchman. The man who can qualify for a conservation warden's place today must be physically and mentally fit for the position. To give efficient service, a warden must be young enough to be active and ambitious, strong enough to stand hardships and long hours away from food, fire, and shelter, brave enough and firm to cope with habitual violators; he must be intelligent and quick thinking; and above all, he must have sound judgment. The applicant for a conservation warden's position today must pass a strict civil service examination and meet the demands of an exacting chief. As such men are found and as funds are available to meet their salaries and expenses, they will be added to the force of conservation wardens and

assigned to the duties of protecting the wild life of the state from the unlawful killer.

New Activities

The foregoing summarizes the progress made in the three older divisions of the work of the conservation commission. Of the four new activities projected by the commission, only one started operations before the biennium closed. This is the department of game, which has as its function the propagation and distribution of game birds in Wisconsin, just as the department of fisheries propagates and distributes fish. The new department is as yet small, but in time it will develop to the point where it will be among the more important activities of the commission.

Before the biennium closed a game farm had been established in Peninsula State Park, in Door county, under the supervision of the new department, and a start was made about June 1 in the raising of ring-neck pheasants. As the biennium closed the work was progressing very satisfactorily, and the results were such as to promise well for the future.

There are three other departments projected by the commission, a department of education and publications, a research bureau, and an advisory council. The department of education and publications is established in response to the need and demand for a wider public knowledge and understanding on conservation matters. It will be the intention of this department to educate the people of the state in conservation to the point where they will become "conservation conscious" and cooperative with the commission in all of its activities. Many publications and much publicity work will be needed to effect this program, and its success will be accumulative as the years pass by.

The research bureau is composed of men qualified by study and experience to be experts in the different matters pertaining to game diseases and other problems relative to the correct and scientific propagation and maintenance of a supply of wild game in our state. The members of this bureau are not paid, and generously devote their time and ability to the work of conservation in Wisconsin.

The advisory council is composed of thirty men, each of

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them from a different part of the state, and it was created to assist the commission in establishing conservation policies. The members of this council, like the members of the research bureau, are unpaid, and devote their time to this work as a generous gift to the great movement of conservation.

No one could have been more helpful and more cooperative in building Wisconsin's conservation program than the legislators themselves. The governor and executive department, the attorney general's office, and other state officers and assistants have contributed time and effort. This cooperation has extended into many state departments. The department of agriculture, the state board of health, the railroad commission, the department of education, the highway and civil service commission, and many others are helping build the Wisconsin conservation program.

The College of Agriculture and the University of Wisconsin have lent their scientists and scientific knowledge to the work. Cooperation has been extended by the Lake States Experiment Station at St. Paul, and the Forest Products Laboratory at Madison, both Federal Government enterprises. The United States Department of Agriculture cooperated in all matters pertaining to forestry, fire protection, fish, game, and predatory animals.

With efficiency as the goal and common sense business methods as the means, the new state conservation commission of Wisconsin has worked out an organization in its short year of existence that is capable of handling all of the multitudinous problems of conservation work in this state. But the commission has not been satisfied with merely effecting an organization. It has formulated and acted upon policies and has already started many worthy conservation projects down the road toward an early and successful culmination.

RECOMMENDATIONS

FORESTRY

- 1. Continue to strengthen and expand the state effort in forest protection.
- 2. Establish state forests of suitable size and properly located in counties approving of such action by the state. To accomplish this, scattered forest lands now owned by the state should be sold and the money used to buy lands in the permanently located state forests, or exchanges made on the basis of equal values. The state should also buy tax titles from the counties to block up its state forest holdings.
- 3. Revise the forest crop law to iron out administrative details discovered during the first year of the operation of this law.
- 4. Increase the planting of desirable trees on stateowned lands at a rapid rate.
- 5. Increase the output from the state nursery in accord with the demand for planting stock from both private and public sources. This will eventually require additional nursery facilities.
 - 6. Establish a state aid forestry program for counties.
- 7. Extend the work of education in proper forest practices among all owners of forest or prospective forest land.
- 8. Develop a system of roads and fire lanes in all state forests so that such areas will be more accessible and their protection made more feasible.

PARKS

- 1. Extend the system of state-owned park areas to include only the best of the naturally attractive areas in the state, together with a number of large areas of woodland on first class waters, either lakes or rivers.
- Complete adequate sanitary, road, and trail improvements in every park, so that these public areas may be made accessible and safe for the health and comfort of visitors.
- 3. Acquire suitably sized areas of old growth timber along the state trunk highways, along well established trails between lakes and at other locations suitable for recreational use, such timber to be preserved and the areas made available as roadside parks.

FISHERIES

1. Purchase suitable areas on the Wisconsin side of the Mississippi river for the establishment of blue gill,

crappie, bass, and sunfish ponds, and lakes for rearing purposes.

- 2. Set aside parts of trout streams and certain areas of lakes to be known as fish refuges.
- 3. Encourage the building of trout rearing ponds in every county of the state where trout streams abound, as well as establishing rearing ponds for other kinds of fish wherever practical.
- 4. One new fish car to be added to our rolling equipment during the next biennium, to complete distribution equipment.
- 5. Resident license law be enacted that more money can be made available for rearing to larger size all kinds of fish for planting in lakes and streams.
- 6. Continue the intensive program of rough fish eradication in the inland waters of the state.

LAW ENFORCEMENT

- 1. Codify and simplify the fish and game laws so that they will be more readily usable and freer of loopholes.
- 2. Make an effort to unify the fish and game laws with those of our sister states, Minnesota and Michigan.
- 3. Make available sufficient funds to appoint as many new wardens as are necessary for different districts in the state, besides funds to provide about thirty extra wardens in the fall and fifteen extra wardens in the spring when the hunting and fishing seasons are at their height.
- 4. Post all large state game refuges according to the law; brush our fire lanes at least thirty feet wide on the boundaries of these refuges and employ refuge keepers wherever and whenever necessary to protect the game on and about the refuges.
- 5. Purchase necessary boats, engines, trailers, and other equipment to place the enforcement officers in a position to check illegal fishing and hunting in all localities.
- 6. Build a headquarters house for the Mississippi River district work at La Crosse on the Isle La Plume.
- 7. The commission looks with favor upon legislation which would result in pensioning the men who have been faithful in the department for a long term of years.
- 8. Purchase distinctive and attractive uniforms for all conservation wardens of a material which will not be duplicated and of a quality that will stand hard wear and can be worn in both warm and cold weather.
- 9. Increase wardens' salaries to the point where they will receive payment more commensurate with their work.

ADMINISTRATION

Because the work of conservation in Wisconsin has grown so tremendously in the past few years, and because of the thought that a broader viewpoint and wiser judgment should be secured, the last legislature changed the form of administration for conservation work in Wisconsin. Four and one-half years prior to August, 1927, the work of conservation had been placed under the direction of a one-man commission. This was changed because of the tremendous scope of the work and the different phases of the movement. The new conservation commission, which began to function in August, 1927, is composed of six unpaid commissioners, three of whom are chosen from the southern half of the state and three from the northern. It is this commission which today directs the policies of the conservation movement in Wisconsin.

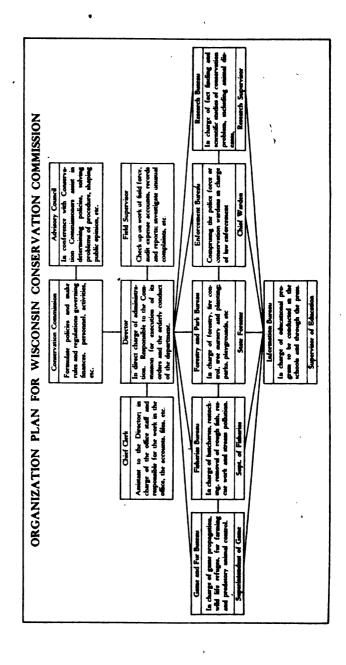
The new type of management of conservation work in this state has been acclaimed throughout the United States as being probably the most efficient and far-reaching form of organization yet effected by any state. Other states have copied in part this form of administration, and many, many inquiries have come into the commission offices, asking for particulars and details as to the way in which Wisconsin directs its great work on conservation.

Having six men on the commission, each of whom comes from a different part of the state, which has its own particular conservation problems, makes it possible for practically all sections of the state to be represented in the body which formulates Wisconsin's conservation policies. This gives a breadth of viewpoint which would be impossible to attain without such an organization. Today all activities and policies of the conservation commission are considered from a business standpoint, from a legal standpoint, from a sentimental standpoint, from a practical standpoint, and from a sportsman's standpoint before they are enacted. It is only by a commission composed of several representative men that such a breadth of view and such a sympathetic understanding of conservation policies can be attained.

Organization

Wisconsin's conservation commission meets once a month at different points in the state for the consideration of problems relating to conservation work and for the establishment and directing of regulatory policies. The meetings are held at different parts of the state so that the commissioners may more conveniently attend, and also to make it possible to study the various conservation problems of Wisconsin at first hand. The officers of the commission are a chairman and a secretary.

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A conservation director, chosen by the commission, is responsible to the commission for the operation of different conservation projects inaugurated by the commission, or by the several trained men directing conservation activities in the state. He is in charge of the commission offices, and the specialists at the head of the several departments are responsible to him. There is also an assistant to the director, who aids the conservation director and acts as office manager.

Five different departments constitute the working organization of the commission. Each of these departments, while separate in itself. correlates its work closely with the other departments, so that the result is an efficiently operated and interrelated group of independent projects under one director, working toward a common end, the conservation of Wisconsin's natural resources. Each of these separate departments has a superintendent especially trained in his own field, and he is directly responsible to the director and to the commission for the success of his own department.

Three of these separate divisions, the department of forests and parks, the department of fisheries, and the law enforcement department, are old established units of conservation activities. The two newer divisions, the department of game, and the department of education and publications, have barely begun their work, but in the future should rank with the older established departments, both in importance and in the scope of their activities. Two other branches of the commission's activities are incorporated in the research bureau and the advisory council.

It is the work of the administration force in the office at Madison to correlate these different activities and to carry on the office details and the huge correspondence of the commission. The duty of the administration force is to see that policies formulated and directed by the commission itself are inaugurated by the different departments and carried through to a successful conclusion.

The general administration work and correspondence in the commission offices in Madison are tremendous, and require a great deal of painstaking effort. It has only been by the establishment of a strictly businesslike system of administration that all of the work could be carried on. This system has been perfected within the last two years to a point where today the office work is done on machine-like schedule and is carried on satisfactorily to all.

Extra care and effort have been expended this past year in the collection of moneys due the commission from its various activities. Prompt settlement of accounts due the commission means more money in the conservation fund. How vitally important this prompt settlement is to the commission can be realized when it is understood that last year by having a prompt accounting of all the money due the commission the conservation fund was enriched by approximately \$13,000 interest money—a much larger sum than it has ever received from this source in a similar length of time.

License Sale

The tremendous amount of office work can be illustrated by the fact that nearly 1,000,000 licenses of different kinds, permits, hunting tags, trap tags, etc., are issued and accounted for each year. All of these licenses and tags, even though they are sold to the users by subsidiary agencies, must be handled through the general office.

The work of the office, as far as the sale of licenses is concerned, has been enormously increased by the establishment of a new policy by the commission, that hunters, trappers, and fishermen holding licenses must also wear buttons. Each of these buttons is numbered serially and corresponds with the number on the license. It is thought by the commission that in the future the practice of wearing buttons will materially augment the income from license sale sources, because of the greater number of licenses which will be sold when this double method of checking has been fully established. Non-resident fishermen have worn buttons during the past year, and the practice will be extended to all holders of licenses sold by the conservation commission. This policy is in accord with the practice followed by most of the outstanding states in conservation work in the country.

The personnel of the administrative force, in addition to the director, assistant to the director, and the five department heads numbers fourteen. There are two field investigators, one of whom handles all fur farm matters, and the other of whom investigates and checks the commission's activities in general throughout the state. There are seven stenographers, a filing clerk, an auditor, two conservation clerks, and one general utility man who works in the commission offices in the Capitol Building.

The two field investigators work out of the office at Madison. Each of them, in addition to his work of investigation and checking, has warden authority. One of these men handles all fur farm matters. Wisconsin has three different kinds of fur farm licenses, those issued for (1) muskrats, (2) beaver, and (3) general licenses, which include raccoon, mink, martin, fisher, otter, and skunk. Before licenses can be issued for the first two kinds of fur farms, the investigator must check over the lands covered by the application and estimate the number of animals living on the land. These animals are sold by the state to the applicant. This field investigator of fur farms also gives advice on fur farm matters, and is continually checking, not only the applications for new farms, but the activities of already established fur businesses.

The work of the other field investigator is varied and general. He supplements the work of the office in checking on expenditures in the field, and he also looks after the activities in the far distant parts of the state, which other officials do not always reach. This investigator also checks the court cases to see that proper remittances are made to various state funds, and that cases are properly handled by the different counties.

It can readily be understood how vitally important the work of the

administration force is to the conservation program when it is realized that the personnel of the office force has been more than doubled during this past biennium. At the beginning of the biennium there were but three stenographers, where there are now seven, and there were but two clerks where there are now four.



Fire Lookout at Tomahawk Lake. One of the new type steel towers.

FORESTRY

A rising tide of popular support for an adequate forestry program for Wisconsin has characterized the biennium ending June 30, 1928. This is clearly proven by the following events: (1) The favorable vote on the constitutional amendment at the spring election of 1927 authorizing special legislation for the taxing of forests. This amendment served as the foundation for the subsequent enactment of the Forest Crop Law. (2) The appointment of a special legislative interim committee on forestry and public lands. (3) The enactment of the Forest Crop Law! (4) Legislation providing for a county forestry program. (5) The revision of the laws relating to forest protection. (6) An enabling act increasing the size of proposed national forests in Wisconsin.

Forest restoration is no longer a sentimental subject. It is not a matter to be determined by snap judgment nor by those in an enthusiastic frame of mind over the beauties of nature or of the out-of-door life. It is becoming more and more a business matter to be solved in an orderly and sensible manner. Its development must be compatible with our industrial and social needs and with the character of our soil and our economic circumstances. At no period has this subject received the profound consideration that it is receiving at present. Certain economic forces have been at work and have compelled the attention of many groups to the possibilities of forests. New forests must be grown on lands suited primarily for such a crop, in order that such lands may produce something of value for the owner as well as for the community, and this fact is being recognized today more than it has ever been recognized before. No conservation program in a state like ours can be complete without forestry as the fundamental activity. Wood-using industries, with the pay rolls they afford, are sustained in the long run only by new forests. The idea that all land will be farmed after being cut overa theory that held sway for several decades at least-is now definitely abandoned and new forests are recognized as a productive and necessary crop from the soil. The recreational industry finds in growing trees an asset that for years it paid little or no attention to. It is a case of new forests or nothing on millions of acres of land.

It is true that as a people we are now experiencing a falling per capita consumption of forest products, and we may expect this trend to continue for some time to come. This fact should not make us unduly pessimistic about the need for forest restoration. It should, however, have its place in our computations as to the adequacy of the program we set up and of the funds allotted to support such a program. Wood is still a fundamental in our civilization and substitutes

for wood will not solve the forest problem. While our population increases, our per capita wood requirements decrease, but it is significant that the actual number of uses to which wood is now put has never been greater in our history. Many of the present day substitutes for wood are inferior to wood and will in turn be replaced by wood. Time will tell where wood is superior and where substitutes are the best. A point of equilibrium will eventually be reached where the per capita requirements will remain fairly stationary. Over and above all these considerations, however, we know that trees and products from trees affect our affairs in so many ways that without them we would find ourselves in distress. Our forest needs must be provided for. These needs will not be satisfied by an indifferent or ill-kept forest, but only by a forest of good productivity—intelligently and scientifically managed.

Fire Protection

The primary present day contribution of the state toward forest restoration is in the protection of forest lands from so-called forest fires. This activity is based on the policy power inherent in the state, which is a well established and long recognized fundamental right of government. Ours is a naturally wooded region. We have trees that reproduce vigorously and grow rapidly—if we give them a chance. To encourage nature to reclothe the land with desirable forest trees requires first of all an adequate protection of such land from fire. These fires may be large or they may be small, but irrespective of size, they are destructive to new forests. Fire has destroyed nature's plan of reforestation in Wisconsin, as it has in all other states. As a matter of fact, the natural reproduction now existing over great areas in Wisconsin in the face of the indifference to fire which characterized the situation for many years is really amazing.

The plan of organization for protection from fire enlists the aid of the Federal, state, and county governments. The state takes the direct responsibility for the organization. The Federal Government aids with an allotment of funds and with a limited field inspection service. The counties aid in the proper selection of field men and in the payment of half of the cost of actual fire suppression. Eleven forest protection districts have been laid out, embracing a total of approximately 14,000,000 acres. Each district is in charge of a forest ranger employed the year around. He is responsible for all affairs in his district. The present biennium has witnessed the establishment of five of these districts and the rapid development of the detection system of lookouts and telephone lines in all districts. Efforts are. continually being made to prevent fire in the first place, to detect fires as soon as possible should they occur, and to suppress them as promptly as possible. In addition to this public effort, considerable aid has been received from private individuals and concerns in the respective fire districts. Such aid is always encouraged. still an unlimited amount of work to be done in improving the

efficiency in the different forest protection districts, particularly in connection with the training of men for fire fighting, the improvement of fire suppression equipment, the reduction of specific fire risk, and the general education of the local people toward better protection. A list of the fire prevention districts with other information follows:

District	Counties	District Ranger	Head- quarters	Area Acres
1	Bayfield Douglas	H. E. Percy	Brule	1,790,000
2	Washburn Burnett	P. A. McDonald.	Spooner	1,150,000
3	Vilas Iron	P. C. Christensen	Trout Lake	1,150,000
4	Forest Florence	A. Kirkpatrick	Crandon	830,000
5	Marinette Florence	J. A. Beitz	Dunbar	960,000
6	Price Ashland	Ray Hassett	Park Falls	1,400,000
7.	Sawyer Rusk	Leif Steiro	Hayward	1,475,000
8	Oneida Lincoln	Henry Freund	Rhinelander	1,380,000
9	Langlade Oconto Shawano	Chas. E. Baker	White Lake_	1,125,000
10	Jackson Monroe	Earl Hilliker	Tomah	1,220,220
11	Adams Juneau Wood	J. W. Blatchley	Friendship _	1,200,000

Trees for Planting

Under this heading is included the operation of the state-owned coniferous nursery located at Trout Lake in Vilas county. This nursery produces trees for: (1) reforestation of state-owned lands; (2) sale for private forestry planting. The output for the year 1926 was 1,200,000 trees; for 1927, 1,600,000 trees; and during the 1928 season more than 2,000,000 trees were shipped out of the nurséry to be planted in different reforestation areas throughout the state. Approximately half of these trees were planted on state-owned lands and half were shipped out for private planting. During the biennium

the capacity of the nursery was doubled and in the near future the output will run from three to five million trees annually. A further expansion of nursery facilities is contemplated if the demand for both public and private planting increases in accord with the growing interest in forestry. The prices and terms under which trees are shipped for private forestry planting may be had on request to the conservation commission.

In cooperation with the commissioners of public lands the work of looking after the state-owned lands has been continued. The state-owned lands are now primarily located within the limits of the forest protection districts and special attention can now be given to protecting these areas, both from fire and trespass. Each district ranger is instructed to pay special attention to those areas owned by the state itself. State lands were further improved during the biennium by the planting of approximately 1,400,000 pine trees at the rate of 1000 trees per acre.

Forestry Extension

The co-operative arrangement between the University of Wisconsin and the conservation commission for forestry education among farmers and other small landowners has been continued during the biennium. This work increases in importance each year as a better understanding of ways and means to apply the lessons of forestry is obtained. Numerous field demonstrations in the planting of trees and in the improving of woodlots were held and contacts made with many owners of forest land.

The commission likewise cooperated with the Land Economic Survey conducted by the State Department of Agriculture. This survey included an intense investigation of the soil, forest, water, and economic circumstances in Bayfield county, and the conservation commission was especially interested in a determination of the rate of tree growth by species and on the different classes of soil.

The conservation commission likewise aided in the Junior Forest Ranger program administered by the Boys' and Girls' club department of the College of Agriculture. This is an officially recognized work among boys of 14 to 16 years of age in tree planting and tree culture work and is part of the so-called 4-H program. A summer camp was conducted on state land at Wild Cat Lake in Vilas county and organized groups of Junior Forest Rangers are now located in a number of Wisconsin counties.

These three activities above mentioned are classed under the heading of forestry extension.

The Interim Committee and the Forest Crop Law

Turning now from the direct work of the commission to otheradvances in forestry during the biennium, and particularly to that part that has to do with the encouragement of private enterprise in forestry, we find the outstanding event to be the enactment of the Forest Crop Law by the legislative session of 1927.

Early in this session a special interim committee on forestry and

24 WISCONSIN CONSERVATION COMMISSION



View from top of Lookout tower.



Ranger Station at White Lake.

public lands was appointed by the legislature. This committee consists of Senators Blanchard, Chairman, and Mueller, and Assemblymen Reis, Trembath, and Fronek. They set to work immediately after appointment. The session of 1925 had approved a proposed constitutional amendment relating to forest taxation. It had long been known that the method of annual taxation of forests was destructive to improved forestry practices. Under the direction of this forestry committee the approval of this proposed constitutional amendment was obtained early enough from the legislative session of 1927 so that the question could be submitted to the people at the spring election. The verdict of the people was favorable. Anticipating this verdict, groups of interested citizens met and formulated a proposed measure. The forestry committee called special hearings and this proposed measure was given full consideration. These hearings were well attended by the owners of land, lumber, paper, and pulp mill concerns or their representatives, county officials, and other citizens, and the final draft of this proposed law was recommended to the legislature.' The legislature passed it, it was signed by the governor, and became Chapter 77 of the Wisconsin statutesthe so-called Forest Crop Law.

The Forest Crop Law is a cooperative measure between the owners of the land and the state. Under its terms the owner of not less than 160 acres (except farm woodlots) declares his land to be better suited for forestry than for any other purpose and that he intends to practice forestry thereon. Because of this intention of the owner, the state, with a view of encouraging forestry on such land, places the owner's taxes at a flat ten cents per acre per year, which is paid to the town treasurer. In order to compensate the town in which such lands may be located for what they might lose through the operation of this special tax law, the state becomes a partner in the transaction by also paying to the town treasurer a tax of ten cents per acre per year. A severance tax of ten per cent of the stumpage value of any forest products cut from any forest crop lands is provided for and the theory is that this ten per cent will reimburse the state for the advance payment made of the ten cents per acre per year to the local treasurer.

Every indication at the present points to the successful working out of this law and great things are expected of it. A large element in this success is due to the energetic and optimistic action of the conservation commission in connection with the administration of this law and the widespread favorable comment of the press, as well as the growing interest of landowners and county officials. The passage of this law was not the work of any one group but came through the efforts of many groups, all of whom were aware that a bold thrust had to be made for better forestry by cancelling the destructive effects of the annual ad valorem plan of taxes on the business of growing trees. It was likewise appreciated that all this had to be done without crippling the local communities in which such lands were located in their financial affairs. Approximately 175,000 acres were petitioned

for entry during the first year of administration, of which approximately 160,000 acres were finally approved as forest crop land.

In the long run the Forest Crop Law will accomplish the following results:

- (1) Provide a definite encouragement of forestry by private enterprise;
- (2) Stabilize local finances from lands of relatively low fertility;
- (3) Isolate lands that are truly forest lands and thereby put an end to the question as to whether such lands are agricultural or non-agricultural;
- (4) Aid in the solution of the delinquent tax question in many counties.

A recent opinion from the attorney general's office states that counties may enter land owned by them under the Forest Crop Law. This insures to any county a definite state aid on any lands they may acquire by the taking of tax deeds to delinquent descriptions, provided the county believes such lands are forest lands and are willing to manage them accordingly. Full consideration of this opinion will indicate that it has great possibilities as an aid in the solution of the delinquent tax situation, which has been a troublesome question, particularly in the northern counties, during the past few years.

Altogether, the Forest Crop Law is one of the most important pieces of forestry legislation that has ever been enacted in this state. The conservation commission realizes the inherent difficulty in the business of growing new forests by individuals or concerns, and with that thought in mind the benefit of the doubt is always given to the owner of land who seeks assistance through the operation of this law. The law is strongly recommended to all who own land suitable for forestry. The commission has great hopes for a rapidly expanding private forestry in this state. Aided by the encouraging features of this law, several substantial Wisconsin companies have embarked on definite forestry programs and industrial forestry is a very positive thing in the affairs of Wisconsin at the present time. Among the leaders in this industrial forestry movement are: (1) Nekoosa-Edwards Paper Company, Nekoosa, Wisconsin; (2) Goodman Lumber Company, Goodman, Wisconsin; (3) The Tomahawk-Kraft Paper Company, Tomahawk, Wisconsin. These companies have made especially noticeable progress during this biennium and their activities are intensive and include the planting of forest trees, selective logging, blocking up lands for forestry purposes by purchase, and the organization of definite forestry departments under charge of practical foresters. Other companies have started forestry operations, but not on the scale of those listed above. Among these companies are: (1) The Flanner Lumber Company, Blackwell, Wisconsin; (2) The Connor Lumber Company, Laona, Wisconsin; (3) The Cornell Woods Products Company, Cornell, Wisconsin; (4) The Holway Land Company, Wausau, Wisconsin; (5) The Yawkey-Bissel Lumber Company, White Lake, Wisconsin; (6) The Hold Lumber

Company, Oconto, Wisconsin. In addition to these companies, all of whom are the owners of large areas of land, there are many individuals whose interest in real, not apparent, forestry has increased during the biennium just closing.

The County Forestry Law

Sponsored by Assemblyman Fronck of Langlade county, the legislature of 1927 passed the county forestry law. Under the provisions of this act counties are authorized to practice forestry on any lands owned by them. This authority is subject to a referendum by the people of the county. Two counties, viz., Langlade and Adams, are now arranging their affairs for such a referendum, and other counties are bound to follow. This is a very constructive piece of forest legislation. The county forestry law is a fine thing for the counties to take advantage of and is recommended for their earnest consideration by the conservation commission.

Revision of Laws

As has already been noted, the laws relating to forest, marsh, and field fires and the protection therefrom were completely revised in the session of 1927. This revision defines and places the authority and responsibility for the prevention, detection, and suppression of such fires in the conservation commission. This revision provides for definite methods for the payment of fire fighters. It authorizes the establishment of forest protection districts and in other ways it gives Wisconsin an adequate law relating to the protection of lands from forest fires.



Planting of Norway pine twelve years old. The trees are fourteen feet high

National Forests in Wisconsin

During the biennium, as a result of prior congressional legislation which authorized an extension of the eastern national forests, an opportunity to consider such establishments in Wisconsin came to a pass. The legislature in 1927, by an enabling act, authorized the acquisition of not to exceed 500,000 acres for national forest purposes in Wisconsin. Considerable discussion followed and a number of prospective purchase areas were laid out by federal forest officials. Several of the counties have given their approval for the purchase of lands within their borders for such purposes. No actual purchases have been made, however, but the necessary approvals as provided by law, including that of the conservation commission, have been given. The final approval must come from the national forest reservation commission, and it is anticipated that in the near future such approval will be forthcoming.

Federal agencies are of great assistance in the successful operation of the forestry scheme in Wisconsin. Some federal money is appropriated for use in Wisconsin, and federal men have always been more than willing to give their time and advice to the solution of Wisconsin's problems. The Forest Product Laboratory at Madison and the Lake States Forest Experiment Station at St. Paul, Minnesota, have both been factors of vital importance in Wisconsin forestry.

Summed up, the biennium ending June 30, 1928, has been one of very substantial progress toward the accomplishment of adequate forest restoration in this state.



Forestry Headquarters at Trout Lake.

STATE PARKS

Wisconsin now possesses thirteen areas designated as state parks. This is one more than reported on for the preceding biennium. The additional area is known as Government Bluff, located near Sturgeon Bay in Door county. Its acquisition occurred at the close of the present biennium through purchase from the federal government, as provided for by a special act of Congress, of an area of approximately 1100 acres. This land was a reserve administered by the war department. It has a very pleasant frontage on Sturgeon Bay, with sharply rising ground from the water's edge, well covered with timber, both virgin and second growth. It will be a valuable addition to the state park system.

In other respects the biennium just closing witnessed a steady advance in park improvements. The road facilities are better now than they have ever been. The new road into the Nelson-Dewey park is just about completed, and improvements were made on the roads leading to, or in, the Peninsula, Devil's Lake, Cushing, Interstate, and Northern Forest parks particularly. The aid for state park roads provided in the state highway law is a very valuable and meritorious arrangement and is serving the people of Wisconsin in making these park areas more and more accessible. Improvements were also made in the sanitary facilities, especially on the Devil's Lake, Nelson-Dewey, and Interstate park areas. The supplies of drinking water are steadily being improved. Protective improvements at dangerous points were made at the Pattison and Peninsula parks. Additional picnic and camping equipment was installed in all of the parks.

It is the concensus of opinion that the summer visitors to the state parks are increasing. The increase was not as pronounced during the biennium herein reported on as it was a few years ago. No precise figures are available, but attempts are being made to get reports annually on attendance. The state parks of Wisconsin are free to all and visitors come and go as they please, so that at the best only an estimate of attendance can be made. Approximately 2,000 camping parties pitched tents in Interstate Park during the season of 1928. While the summer visitors are undoubtedly increasing, it is significant that the winter visitors are decreasing. Observation indicates that ten years ago more people spent time on the state parks during the winter than do at the present time.

All the state parks are game refuges. The observations of the park superintendents indicate that while most of the areas are relatively small to serve as game refuges, this feature is meeting with success. For instance, mink have increased in numbers at Devil's

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Lake park, deer are increasing in Peninsula park, and partridge have thrived in the Brule area. Of course, on the larger areas, such as the Peninsula and Northern Forest parks all kinds of wild creatures, including song birds, find splendid refuge, and this policy has resulted in a noticeable increase in their numbers. This contribution of the state park areas, while not a controlling one, is nevertheless an important item in game affairs.

Need More Parks

In addition to the present state parks, it is becoming increasingly evident that sizeable areas of natural wilderness, embracing lakes, rivers, forests, and wild life, are necessary in a well-rounded state park program.

Wisconsin is well located and possesses the requisite advantages of climate and scenery, good roads, and living accommodations to be the natural playground for the millions to the south of us. Our thousands of forested lakes and trout streams, the scenic and historic



View of Tyler's Fork in Proposed Copper Falls Park

north and east shores washed by Lake Superior and Lake Michigan respectively, the bluffs of the Mississippi on our west, unexcelled hunting and fishing, a fall forest coloring unequalled anywhere, and a cool, invigorating summer climate are some of the attractions offered to the tourist, whether of our own or an adjoining state. But in addition to that, there have been, and will continue to be, attractive public areas set aside at convenient places in the state, where these tourists may find good water, sanitary living conditions, and the rough comforts that one would expect on an outing. The tourist driving the large car as well as the man driving a small one will be provided for either at the regular hotels or resorts along the way, or in his own tent, should he care to carry one. In this general plan the state parks play an important part.

It is the opinion of the conservation commission that only the most outstanding, the most unique, or most historic areas in the state should be included in the state park system, and that these areas should be selected with the utmost care. Embracing so many attractive places for park purposes, it is obvious that the state cannot own and take care of them all. Therefore, it is felt that a series of county and township parks should eventually supplement the state park system, and these areas should be owned and managed by local bodies. While they will primarily serve local needs, they should nevertheless be public in their nature, so as to provide for the tourist and furnish him with a spot where he knows he will be welcome.

Wisconsin State Parks

Name of Park	Location	Area	How Acquired	Original Cost	Date Estab- lished
Peninsula	Fish Creek, Door				
r enimenta	county.	3 ,400 acres	Purchase	\$104,282.41	1910
Devil's Lake	Baraboo, Sauk county	1,400 acres	Purchase	216 .181 .72	1911
Nelson-Dewey	Wyalusing, Grant	1,500 500		210,202	
	county	1,650 acres	Purchase	46 .189 .88	1917
Pattison.	Superior, Douglas	- ,		. ,	
	county	660 acres	Donated		1919
Interstate	St. Croix Falls, Polk] .	
_	_ county	580 acres	Purchase	22 ,577.75	1895
Perrott	Trempealeau, Trem-		l	1	
Tim	pealeau county	950 acres	Donated		1917
Rib Hill	Wansau, Marathon	100	Donated	1 1	1922
Brule	County	160 acres	Donated		1922
Druse	Brule, Douglas	640 acres	Donated		1906
Coshing	Delafield, Waukesha	040 80708	Donated		1500
Casting	county.	8 acres	Donated		1915
Tower Hill	Iowa county	60 acres	Donated		1922
Old Capitol	Belmont, Lafayette		, ,		
	county	2 acres	Donated		1923
Government					
Bhuff	Sturgeon Bay, Door		l		
	county	1,100 acres	Purchase	1,307.68	1928
Northern Forest.	Trout Lake, Vilas	Approx.	١.,	Approx.	1005
	county	100 ,000 acres	Purchase	850,000.00	1925

FISHERIES

In artificial fish propagation, as in most other phases of conservation, Wisconsin has always been among the leaders of the several states. Fish culture work has been carried on continuously in this state since 1873, in which year the sum of \$500 was appropriated to be expended under the direction of the United States Commissioner of Fisheries for the artificial propagation of fish for our lakes and streams. As was usual with most fish propagation enterprises at that time, salmon received the bulk of attention, and as near as can be estimated, 20,000 salmon were hatched at a private hatchery located at Waterville, in Waukesha county, and planted in lakes around Madison and Lake Geneva. The following year, under Chapter 253 of the Session Laws of 1874, there was appointed a commissioner of fisheries and the legislature appropriated \$360 to carry on the fisheries work.

From the feeble efforts of those early days in the '70's of last century to the last year of the past biennium, when more than 289,000,000 fish were distributed by the Wisconsin conservation commission, is a long, long journey, and it is a journey freighted with successes and failures, with advances and setbacks, occasioned by an ever groping and ever experimental method of work. From the beginning, when Wisconsin was one of the first states to establish fish commissions, to the present, when Wisconsin still stands well out among the leaders in this work, scientific experiment has always characterized Wisconsin's work in fish culture. The work has expanded, and the results accomplished have increased with the years.

The first hatchery for the artificial propagation of fish in this state was established in the year 1875. It was located about five miles out of the city of Madison, and at that time it was known as the Nine Springs Hatchery. Later its name was changed to the Madison Hatchery, under which name it is still in operation. Every year millions upon millions of rainbow and brown trout eggs are collected from the fine stock of brood fish held in the ponds on the grounds at this hatchery.

Twenty-two Hatcheries

Today Wisconsin has twenty-two hatcheries in operation, at Madison, Bayfield, Wild Rose, Minocqua, Delafield, St. Croix Falls, Sturgeon Bay, Sheboygan, Osceola, Lakewood, Hayward, Westfield, Spooner, Eagle River, Tenney Park, Sparta, Eau Claire, Brule, Haugen, Wisconsin Rapids, Birchwood, and Wausaukee. It is in these hatcheries that the tremendous numbers of fish are raised each year by the Wisconsin conservation commission, and it is from these

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hatcheries that the shipments of fish are made to every part of the state to keep Wisconsin's waters well stocked with these fine food fishes which made the Badger State famous throughout the country as a mecca for fishermen.

Aside from the practical use as breeding and rearing places for fish, Wisconsin's fish hatcheries serve another purpose to the people of the state. Almost all of them are beauty spots, and many of them have been so arranged that there are ample facilities for sightseers to visit and picnic. That the people of the state appreciate this extra service of the hatchery sites is shown by the great numbers who visit the hatcheries every day during the spring, summer, and fall. The St. Croix Falls, Bayfield, Wild Rose, and Madison hatcheries particularly illustrate this use, and as many as 15,000 people have been seen on the grounds of any one of these hatcheries on a single Sunday during the summer season. It is particularly on account of this use of the hatcheries that the department of fisheries takes so much care in keeping the buildings well painted and sanitary and the grounds attractive.

Improvements have been made in all of the hatcheries during the past biennium. All the hatchery buildings in the state have been repainted during this past two years, and there have been major improvements in working equipment at several of them. Bayfield hatchery a 1300 foot 24-inch pipe line has been installed to furnish an adequate supply of good water for hatching and rearing purposes. At Delafield all the bass ponds have been repaired with concrete walls, and at the Madison hatchery two concrete raceways have been constructed through the old open pond. The old pond has been filled in, which adds a great deal to the beauty of the grounds, as well as providing space for holding ponds. At Wild Rose the car barn which has housed the large railroad fish car owned by the commission has been lined and arranged so that now the fish car can be painted by the men at the hatchery when necessary. A new and modern hatchery building has been built at Westfield, which brings that hatchery up to par among trout hatcheries of the state.

Distribution of trout from hatcheries to the railroads has been tremendously speeded up during the past biennium by the purchase of two new specially constructed automobile trucks, to carry the cans of fish from the hatcheries to the railroad. Each of these trucks can carry in one load 100 cans of fish, so that one trip by the two trucks can bring the 200 cans which the railroad fish cars will hold from the hatcheries to the tracks.

The benefits of using these trucks can be shown by using the example of the St. Croix Falls Hatchery. Trout distributed from this hatchery must be taken to Hudson, about forty miles away. As it takes about 45 minutes to load 100 cans with fish, and at least two hours to haul them the 40 miles, the trucks had to be constructed in such a way that each can could be supplied with air from the time the fish were put in until they were delivered to the railroad station. Each of these trucks is supplied with a special air compressing unit,

with pipe lines running lengthwise back and forth across the body of the truck, so that an air pipe line could be put into each can in its place on the two shelves which run the full length of the truck, as well as on the floor. Before the loading process is begun, the air tank on board the car is pumped up to about 125 to 150 pounds pressure, and as soon as the first can of fish is put on the truck, a rubber tube supplied with a square piece of basswood on the end is placed in the can. The air passes through the pores of the wood and introduces oxygen into the water in very fine bubbles. It is necessary to introduce this oxygen into the cans in this way to prevent all the oxygen from immediately going out, as it would if the air were merely blown into the can through an open tube in large bubbles.

Similar aerating devices are used on the railroad fish cars, three of which were used by the commission during the past biennium. The commission owns one railroad fish car, the Badger No. 2, and the Chicago and Northwestern Railroad graciously furnishes two baggage cars to the commission, free of charge, to use in this distribution work. By the use of these scientific, up-to-date aerating devices, fish can be distributed to any part of the state from the large hatcheries, and can arrive in excellent condition. The speed with which shipments of fish can be taken from the hatcheries to the railroad cars because of the new delivery trucks makes it possible to reach practically any point in the state within 24 hours after the fish are taken from the hatchery ponds.

Propagate Many Fishes

Nearly all kinds of fine food fishes that live in fresh water are distributed by the commission. Brook, brown, rainbow, and lake trout, and whitefish are hatched for our cold water streams and lakes and for Lake Superior, Green Bay, Lake Michigan. Bass, blue gills, pike, muskellunge, pickerel, white bass, perch, bullheads, and many other kinds of pan fish belonging to the sunfish family, are dis-



One of the new specially constructed trucks used in fish distribution.

tributed by the commission, either from the different hatcheries, or from the different fish rescue operations carried on by the commission on the overflowed lands of the Mississippi and Wisconsin rivers. Thirteen of Wisconsin's hatcheries devote much, if not all, of their attention to the propagation and distribution of different kinds of trout, and it is almost entirely due to the activities of these different hatcheries that Wisconsin retains its enviable reputation as a state for trout fishing. Wall-eyed pike, different kinds of basses, muskellunge, whitefish, perch, and pickerel are raised in other Wisconsin hatcheries. Appended to this report is a statement by hatcheries of the numbers of fish raised and distributed from each hatchery for each of the two years in the past biennium.

During the biennium just preceding the last one, the artificial propagation of muskellunge was carried on in an extensive experimental way at the Minocqua hatchery. Results obtained from this experimentation were so satisfactory that they warranted the development of this work as a regular part of the activities of the department of fisheries. Wisconsin is probably more famous as a muskellunge state than any other state in the country, so it is altogether proper that the department of fisheries should strive to maintain this enviable reputation.

Much difficulty is encountered in the propagation of muskellunge, because the eggs of these fish are so delicate. During the last year of the past biennium enough eggs were taken to hatch out more than 135,000 muskellunge. Most of these were planted as fry, but approximately 2,000 were held in the rearing ponds at the Minocqua hatchery until they reached the muskellunge fingerling size, which is approximately nine inches. Because small muskies grow so fast and because they must be fed on live fish, obtaining food for them is one of the biggest problems in muskellunge propagation. Two men have been kept busy continually searching the country around the Woodruff hatchery to find enough live rough fish minnows to feed the small muskellunge in the rearing ponds there. If muskellunge rearing is to develop in Wisconsin, it may be necessary in the future to ship carloads of rough fish minnows from the southern part of the state to the northern hatcheries, where the fish will always be raised.

Commercial Fish Propagation

Wisconsin is the only one of the Great Lakes states that carries on very extensive commercial fish propagation work. Commercial fishing in the outlying waters has always been an important industry in Wisconsin, and it is the intention of the department of fisheries to perpetuate this industry, which can be done only by increasing the numbers of commercial fish in those parts of Lake Superior, Lake Michigan, and Green Bay which border on Wisconsin. Commercial fish hatcheries of Wisconsin are located at Sheboygan and Sturgeon Bay and approximately half of the work done at the Bayfield station is of the commercial kind. The Sheboygan and Sturgeon Bay hatcheries each have a capacity of about 16,000,000 lake trout and 50,000,000

whitefish eggs, and there are also millions of whitefish and lake trout distributed from the Bayfield hatchery each year. The Bayfield station received help from the United States Bureau of Fisheries each year to the extent of from one to two million lake trout that are hatched at the Federal hatchery at Duluth for planting in Wisconsin waters.

Because practically every kind of the finer varieties of food fishes are found in Wisconsin waters, the commission does not believe that it would be wise to introduce new varieties, but for the benefit of the commercial fisheries, experiments have been carried on at the Bayfield plant in the introduction of Pacific salmon for the waters of Lake Superior. This experiment was carried on for approximately five years, preceding the present biennium, but during the last two years no work has been done along this line, because it has been impossible to get any more salmon eggs from the west. However, although the experiment had gone on for five years, it is only occasionally that one of the salmon is caught by any of the commercial fishermen in Lake Superior.

It is probably in the removal of rough fish from Wisconsin waters that the conservation commission has made its greatest progress during the past two years. A new policy regarding the eradication of rough fish was adopted by the new commission early in its history, and today the interest of the commission is directed entirely toward the removal of detrimental rough fishes rather than to the interests of rough fishermen. No more are exclusive contracts given for certain waters, nor are any contracts made for a longer period of time than one year. It is thought by the commission that competition among the rough fishermen will lead to larger catches and that the short contract will make each fisherman get all he can in the way of rough fish from a certain body of water during the time of his



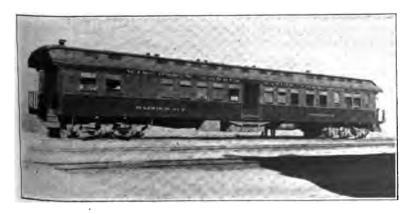
Winter Scene at Bayfield Hatchery.

contract. Certainly the results obtained under the new policy during the one year of its operation have justified the hopes of the commission. In the lakes around Madison, for instance, more rough fish have been removed during this one year than there had been in any five year period before. A tremendous number of rough fish, particularly carp, have been removed from Madison lakes this year, and the state's share of the income derived from the sale of these rough fish reaches quite a respectable figure.

Fish Rescue Work

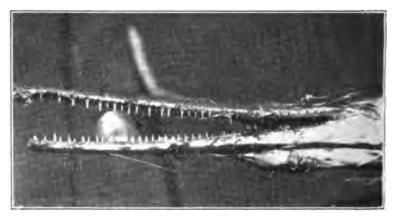
Among the activities of the department of fisheries other than the propagation and distribution of trout from the hatcheries is the fish rescue work which is carried on each year when conditions make it possible, from the overflowed lands in the Mississippi, Fox, and Wisconsin river valleys. The tremendous demand for fish rescued every year by the commission makes this operation one of continually increasing importance. During the second year of the past biennium the commission rescued 14.707,700 miscellaneous fishes from landlocked sloughs in the Mississippi river valley. This work is carried on by special crews of men who travel up and down the river valleys, wading into the land-locked pools which have been caused by the receding waters in the river. Although the commission distributed more than 14,000,000 fish rescued in this way, this number is infinitesimal when compared with the number returned to the Mississippi River. Were it not for the work of the fisheries department of the Wisconsin conservation commission and the fisheries departments of the federal government and of the other states bordering the river, hundreds of millions of fish would perish every year in these landlocked pools. While some of the fish rescued are large, most of them are of a size well adapted to planting in inland lakes and streams where they have a good chance of growing to a catchable size.

The scientific precision and businesslike efficiency that characterizes



The Badger No. 2 Fish car.

the operations of the fisheries department were more in evidence during the past biennium than in any previous time in its history. Methods of fish propagation have been employed, and the chances for loss in fish culture have been largely minimized by the application of scientific methods, arrived at from research work carried on by the department of fisheries. One of the most important tendencies during the past biennium has been the holding of fish until they are of a fingerling or larger size before distributing them, rather than planting fish in the small fry stage. Numbers of casualties among small fish are considerably greater than when the larger fish are planted. Consequently, it is the intention of the department of fisheries to



Head of a gar pike, one of our most destructive rough fish.

distribute and plant fish which are larger and can be caught by Wisconsin citizens as soon as possible. More pains have been expended upon rearing fish than ever before. Rearing ponds have been built and maintained at many of the hatcheries, and the start made during the past biennium in this direction represents a tendency which will increase as the years go on.

Scientific Discoveries

There have been two outstanding discoveries made along scientific propagation lines during the past biennium by the department of fisheries. One of them concerns the length of time which male sperm remains active after it comes in contact with water, during which period fertilization of the female egg can take place. Microscopic researches were carried on in the Madison hatchery during the spring of 1927, and from the extensive research conducted it was discovered that after the milt from brown trout has been in contact with water for sixteen seconds, all noticeable activity ceases. This knowledge is invaluable to the elimination of the element of chance in the fertilization of trout eggs, and its use can be appreciated by the

wonderful results the Wisconsin conservation commission has had in trout culture recently. By use of this knowledge, milt, which contains the male sperm, can be introduced into the dry pan with the female eggs at just the right time before water is added so that a maximum fertilization will take place. This tends to eliminate one of the greatest reasons for the tremendous loss in natural reproduction of fish, which was the lack of timeliness in fertilization.

The other discovery is of particular importance to Wisconsin. grew out of what was called the iodine experiment in the waters of the Madison hatchery. It had been noted that some of the small fish in rearing ponds at this hatchery had goitrous infections. Fish in Wisconsin waters are particularly subject to such infections, as they are also in the waters of the upper peninsula of Michigan, and in Minnesota. With the cooperation of university scientists, the Wisconsin conservation commission carried on an experiment which is still continuing, and which consists of placing certain amounts of iodine or iodine compounds in the waters of certain rearing ponds. Other ponds are left without iodine. The iodine treatment was begun about the time that the small fish began to feed, as the goitrous growths do not appear until fish have reached this stage of development. No trace of this goitrous growth could be found in the fish in the water which had been treated with iodine, and the treated fry grew more rapidly than the uncontrolled fry till at the age of six months they were found to be four times as large as the untreated fry at the same age. Very few treated fry died, whereas in the twenty years previous practically all the fry which were hatched at this hatchery had died, unless they were removed to other waters. The thyroid from the fry of the treated group was found to be smaller with no traceable infection, while the untreated group showed general infection. From this study it is concluded that iodine prevents the appearance of this goitrous condition in trout fry in Wisconsin waters. This knowledge will prove to be very valuable in regulating water conditions in the rearing ponds of Wisconsin hatcheries in the future.

One tremendous advance made by this department in the furnishing of information by which to regulate trout distribution is the check up which was inaugurated during the past season. A field investigator checked up on practically all of the shipments of fish for the commission, investigating the waters in which they were planted and the kind of treatment the shipments received at the hands of the people who had ordered them. This field investigator also acted as a teacher of proper methods of fish planting. Trout shipments in the future will be distributed in the light of the knowledge received by the investigation carried on by this man during the past year.

The activities of the fisheries department of the conservation commission have grown proportionately to those of the other departments, and it is expected that the growth will continue during the next biennium. At the present time the commission is planning to build hatcheries at Crystal Springs, near Antigo, at Fort Atkinson, and at

some other place in the southeastern part of the state. These three new hatcheries and additions to and improvements in the existing hatcheries will probably place Wisconsin in the lead among midwestern states in fish culture work.

Perhaps even more during the past biennium than at any time previously the federal bureau of fisheries has cooperated with the Wisconsin department in furthering the work of fish propagation and distribution. At all times the advice and experience of Federal men has been at the disposal of the Wisconsin commission, and there have been many times when the Federal and State men have worked together. This cooperation is particularly evident in the Mississippi river rescue work.

The following is a list of the hatcheries and the superintendents of all hatcheries which have permanent men in control:

Wisconsin Fish Hatcheries

Hatchery	Superintendent
Madison	Frank Meade
Bayfield	Chris Faulkner
Wild Rose	Fred Hewitt, Jr.
Minocqua	Wendel Anderson
Delafield	
St. Croix Falls	Ben Durkee
Sturgeon Bay	Percy Weaver
Sheboygan	•
Osceola	•
Lakewood	
Hayward	Cliff Hill
Westfield	
Spooner	
Eagle River	
Tenney Park	
Sparta	
Eau Claire	
Brule	Fred Walquist
Wisconsin Rapids	Fred Leisch
Haugen	
Birchwood	
Wausaukee	
·· · · · · · · · · · · · · · · · · · ·	

Besides the general program of rough fish eradication in Wisconsin waters which is carried on by contractual arrangements between the conservation commission and commercial fishermen, the legislature specifically ordered work to be done in removing rough fish from certain northern waters and from the Lake Winnebago district. From the northern waters during the biennium the commission has removed 312,000 pounds of undesirable fish, most of which were suckers. The accompanying table tells of the work done in the Winnebago district.

ROUGH FISHING OPERATIONS, DECEMBER, 1927, TO DECEMBER 30, 1928

Removal of Rough Fish from Northern Waters

		No. of Suckers
From May 14 to May 26 From May 14 to May 26	Big St. Germain Lost Iake Twin Lake Stone Lake Sand Lake Lake Vieux Desert	14,430 3,860 20,550 4,825 2,000 22,360
	Total	68 ,015

68,015 suckers at 3 lbs. to the fish-204,045 lbs.

Removal of Rough Fish from the Winnebago District

	Law- yers	Suck- ers	Gar- fish	Sheep- head	Dog- fish	Carp	Total
Dec. Jan. Feb. March June July Aug. Sept. Oct. Nov. Dec.	8,803 3,549 1,854 1,821 6 5 7 171 3,044 201 2,700	185 245 414 185 415 903 1,189 810 2,054 338 102	1,496 1,037 872 103 11 11 9 4 68 28 114	35 25 26 23 5,552 8,714 7,846 3,224 4,718 2,667	150 134 31 30 84 7 85 269 9	20 25 2 7 14 79 101 58 48	5,898— 5,689 5,015— 5,015 2,671— 2,689 1,619— 1,619 5,998— 5,998 9,746— 9,746 9,109— 9,109 4,802— 4,802 10,196— 10,196 3,244— 8,244 2,924— 2,924
	16,661 ×8	6 ,740 ×8	8 ,253 ×8	88,830 ×8	707 ×8	850 ×8	60 ,422— 60 ,541 ×8
	49 ,983 #	20 ,220#	9 ,759#	98 ,490#	2 ,121 #	950#	181 ,623 #

181 ,623 # Winnebago 204 ,045 # Northern Waters

885 ,668 # Rough fish

LAW ENFORCEMENT

The financial success of conservation work in Wisconsin must of necessity be largely due to the vigilance and efficiency of the law enforcement division of the commission. This is true because conservation work in Wisconsin pays its way out of the money it earns from the sale of licenses and tags, from its share of the rough fishing revenue, from the sale of confiscated goods, etc. Having an efficient force of conservation wardens in the field and actively on the job is a tremendous stimulant to the sale of licenses, which augments the revenue of the commission, making possible further activities. Of course the number of confiscations is due entirely to the efficiency of the warden force. Wisconsin's conservation wardens benefit one other state department particularly. All of the revenue derived from fines imposed upon convicted game law violators goes into the state school fund.

Probably greater advances have been made during the last biennium in the law enforcement division of the commission than in any other single department. A larger force of better trained wardens is in the field today than ever before, and the work of Wisconsin's conservation wardens now compares very favorably with that of any similar force of men in any state in the Union.

An appointment to a position as conservation warden today depends entirely upon the mental, moral, and physical fitness of the applicant. All men who become conservation wardens today must pass what is probably the most comprehensive examination given by the state civil service commission, and in addition to passing the examination, must meet the demands for an exacting chief and stand up under two actual tests of warden work, one of them in the company of an older, experienced man on the force, and the other one by themselves. Knowledge of the subject is absolutely essential to secure a passing grade in the deputy conservation warden examination, and any man who can make a good mark on the examination is thoroughly acquainted with the subject of conservation.

Civil Service Examination

The examination consists of four parts. The second part is the written test, which is held by local examiners of the civil service commission in the various county seats. The sets of questions and a list of eligible candidates are sent to each of the local examiners by the Madison office of the civil service commission, and notice is also sent to each eligible candidate. This written quiz consists of 250 questions, by far most of which concern conservation and law enforcement matters. These questions are formulated by officials of the



A. J. Robinson, Conservation Warden at Rhinelander, who led the field force in number of arrests during 1927-28. This picture shows the complete new conservation warden uniform.

civil service commission, with the help of the chief conservation warden. The third part of the examination is visual, in which each candidate attempts to classify thirty marked birds—game, song, and unprotected—and approximately twenty pelts of animals. All of these birds and animals are native to Wisconsin, and complete knowledge of them is essential to the successful performance of a warden's duties. In this visual part of the examination, besides the identification of the stuffed birds and animal pelts, each candidate must name and classify thirty-five varieties of fish from a book of colored plates, and he must identify by name approximately sixty-five native birds and animals, also from colored plates. The fourth, and last, part of the examination is oral, conducted by the secretary of the civil service commission and the chief warden. This oral quiz is to determine the personal fitness of the candidate for the work of a conservation warden, and is truly comprehensive in scope.

After a man has been certified by the civil service commission as naving passed the examination, he is given a trial appointment by the chief warden to work for sixty days with an older warden. If the candidate makes good on this appointment, he is sent out alone for three months, and if he proves satisfactory on this tryout, he is recommended for regular employment.

It can readily be seen that a man who can qualify under this strict examination must be well fitted for the position of deputy conservation warden, and also must be of the type of man whom any group of law enforcement officials would be glad to include. The conservation commission today feels proud of its enforcement staff, and while it realizes that there is still room for improvement in places, all of the territories are being brought up to a high standard, and Wisconsin's conservation wardens today are on the job and getting results. As good men are found and as funds are available, the warden force will be increased to the point where the state will be thoroughly patrolled.

Two Kinds of Violators

There are two kinds of violators with whom the conservation wardens must cope. The first of these, and the one which presents the least problem, is the case of the unintentional violator. The commission's policy of seeking to prevent violations rather than to punish violators is working out very satisfactorily with this type of violator. Education by the publication of conservation rulings and laws, warnings by the conservation wardens by word of mouth and by their known and advertised presence in the communities as uniformed officers of the law is having an excellent effect in deterring the casual violator.

It is with the habitual and intentional violator that the warden has his biggest problem. These men cannot be altered from their course by warning, and the only recourse left to the officer is arrest and conviction. That the conservation wardens have been on the job and getting results during the past biennium can be seen by a study of

the figures of the numbers of arrests made during the last biennium, as compared with the preceding ones. In the whole state of Wisconsin during the first year of the biennium preceding the last one, there were only 605 arrests made. During the year just past the wardens made 1513 arrests in the state. This increase is due, not so much to the increase in the size of the force, because there has not been a large increase, as it is to the vigilance and painstaking efforts of the wardens.

The greatest handicap in preventing game law violations in Wisconsin at the present time is the attitude taken by some of the courts of the state towards game law violators. In some counties it is almost impossible to secure conviction of a violator, and in a few instances, even district attorneys look upon game violations as natural and of no importance. The commission is not inclined to be critical when judges and prosecuting officers show leniency to men in court who have made their first mistakes. But the commission is critical, and it believes rightfully critical, when there is evidence of desire on the part of a court or prosecuting officer to favor and cater to the habitual and willful violator and his friends. This attitude of the courts is a controlling factor in some sections of the state, but fortunately this attitude is becoming less rather than greater. Eventually this attitude may be entirely eradicated, and it is thought that if it is eradicated it will be due to a change in public opinion. There is no force like public opinion to bring reluctant officers and representatives of the law into line, and the commission appeals to the better instincts of the people of the state, individually and in groups, to bring about this pressure of public sentiment upon wayward courts and prosecuting officers.

Warden Changes

During the last biennium many changes have taken place in the organization of the law enforcement division of the commission. New wardens have been stationed in some places, and other wardens have changed districts. The changes during the past biennium are as follows:

Warden F. A. Stiglbauer. was placed at Oconomowoc, to replace Warden E. M. Tuttle, who died.

Warden Ernest Swift, who had been in the forest division of the commission at Crandon, replaced Warden W. W. Wismer at Hayward. Warden Wismer had resigned.

Warden E. L. Alderman was placed at Portage, a district which had needed a warden for many years.

Warden Arthur Baie was assigned to the post at Marinette to replace Warden Edward Apel, who was moved to Eau Claire to replace the late Charles Little.

Warden Louis Giesen was assigned to work with Fountain City as his headquarters. He assists in the extensive Mississippi river work.

Warden Stewart Hayner was placed at Three Lakes, a district which had been without a warden and which needed one badly.

Warden H. L. Haugen was placed at Loretta, another new district. Warden E. P. Johnson was assigned to the Ladysmith district to replace Louis Soule, who resigned.

Warden A. J. Peterson was placed at Racine, to succeed Warden John Kupper, who had been killed while on duty in a railroad crossing accident.

Warden W. H. Riebe was assigned to Eagle River to replace Warden H. J. Oberholtzer.

Warden James Edick was assigned to Crandon to fill the position after Warden Ernest Swift had been transferred to Hayward.

Warden A. P. Vander Kelen was assigned to Door county, with Sturgeon Bay as his headquarters, a new district which has a great deal of work for a warden.

Warden Lawrence Hope was placed at Hammond to succeed Warden Andrew Hope, who had died.

Wardens Harry Hosford and Dan Trainor were assigned to the districts at Medford and Princeton respectively, both of which were new stations for wardens.

These new assignments have been made by the conservation commission in answer to a general demand for more enforcement officers. The commission makes the assignments to the territories where the need seems greatest. As good men are found and as funds are available to pay their salaries and expenses, wardens will be assigned to many more districts in the state. Among the districts which will receive immediate attention are Fond du Lac, Richland Center, La Crosse, Kenosha, Wausau, Florence, Goodman, Solon Springs, Mauston, Menomonie, and Star Lake.

While many of the changes effected in the personnel of the enforcement division have been transfers, there have been ten new permanent appointments made. At the beginning of the biennium there were forty-eight officers in the warden force and at the end of it there were fifty-eight.

At many times during the past biennium the law enforcement division has felt the helpful hand of cooperation of the Federal warden service. Particularly in laws controlling fur farms and the trapping of fur bearing animals and the sale of furs has this cooperation been helpful. Another specific instance in which the federal and state wardens have worked together has been in the migratory bird treaty act. The time and experience of Federal game wardens have always been at the disposal of the chief warden, and the two different agencies have worked in absolute harmony for the better enforcement of the fish and game laws.

The best way by which an understanding of the work of the law enforcement division of the conservation commission can be reached is by a study of the individual records of the men.

Individual Wardens Records 1926-1927

	DIENN.	IAL REP	JRT	
Jail Sentences	1—60 days 1—10 days 1—10 days 1—90 days 1—90 days 1—80 days 1—60 days		2—40 days 1—80 days 2—90 days	1—7 mo.
Seizures	86 8 8 4 9 100 100 100 100 100 100 100 100 100 1	2002 o	Spansunce	© – 61 4 70
Costs	\$140.03 176.54 306.82 184.07 58.95 31.80 8.80 206.04 893.17	148.65 62.70 33.29 58.60	156.33 32.00 104.42 92.60 84.01 42.38 94.51	38.16 7.80 14.05 12.20 27.95
Fines	\$907.50 1,250.00 1,831.50 600.00 850.00 850.00 1,425.00 2,000.00	725.00 600.00 230.00 530.00	726.00 300.00 1,250.00 650.00 950.00 605.00 1,110.00	200.00 1,160.00 275.00 200.00 250.00
Lost	1 1 1	44 0	- 01	
Won	12844 e 8088	28 7 16 16	15 18 18 12 12 12 12 12	∞ 1042000
Cases	112 10 10 10 10 10 10 10 10 10 10 10 10 10	38 90 PE	2881788 20178 13	ස ා 4 ආ ආ ආ
District	Antigo Oshkosb Whitewater Madison Black River Falls Hayward Hayward Portage Eau Claire	Marinette Mertili Wisconsin Rapids. Wausau.	Webster Spoozer Spoozer Milwaukee Baraboo. Oshkosh Manitowee De Soto. Ocento Falls Tomakawk	Milwaukee Fourtain City Milton Sheboygan Abhland Darlington
Warden	Mac Kenzle Boonner Boonner Blijdt Flijdt Lanbin Kaver Wisnor	Baie. Bosworth. Bosworth. Cranston. Curtis	Devine, B. Devine, T. Diedrich Diedrich Dunham Egan Egan Emberson Fisher	Gettleman Giesen Gresy Grubber Grubber

Individual Wardens Records-Continued

Warden	District	5	uo M	1 86	Fines	S = 5	Selzures	Jali Sentences
Hayner	Three Lakes.	6	8		\$425.00	\$47.10	=	
Haugen.	Uraper	9	3	N	990.00	8. R		2 - 60 days
Hendrickson.	Two Rivers	-	-		20.00	3.56	1	
Hilliker	Tunnel City	œ e	œ ;		325.00	75.69		1-90 days
Hope, Andrew	Hudson Doint	23.5	20 2	N	829. 929. 93. 93. 93. 93. 93. 93. 93. 93. 93. 9	112.50		
normost	Delline	23	9:		200.4	250.5		
Jacks	Appleton	19	19	•	800	45.82	- 64	
Johnson, E. P.	Ladysmith	•	ص		325.00	15.84	_	
Johnson, T. J.	Whitehall	14	7		1,050.00	117.81		
Kabat	La Crosse	82	9	L - (202.00	15.59		
Keeler	Fennimore	200	200	N	3.626.	20.00		SA CAN
Presentation of the second of	Loan	8	3		B. 600, 1	100.00		1-45 days
- Parke	LA Crosse	9	-	10	20.00	2,50		
	Luck	*	*		300.00	82.20		
Juo	Mellen	88	8		1,800.00	89.00	22	3—60 days
McNaughton.	Superior	£,	83	61.	1,580.00	181.62		
eterson	Kacine	•	4 '	-	8.69	18.74		
OWell	Milmonton		٥,		8.5	20.02		
Vendall	Wanted The second secon	• •	r q		35	90.90	3.	
Seehe	Horizon	250	° <u>«</u>	4 00	775.00	2.8	• 1	
Ziebe	Earle River	2	=	-	625.00	55.86		1-30 days
		}	1	1				1-60 days
Rbeaume	Mercer	8	22	64	860.00	110.06	ន	2-80 days
	Of constitution	8	ê		200	-	;	1—60 days
Robinson	Rhindander	35	3 %		175.8	111 17	1	9-80 dave
		:	}	•		-	•	1-60 days
Scolman	Rice Lake.	8	ង	**	1,000.00	104.10	=	4-80 days
Smith	Green Bay	•	•		280.00	27.82	_	
Notice the second secon	Ladysmith	8 •	3°	-	20.00	3.8	9.	
Under west	Sherran		0 (-	1 610.00	00.02 88		1 St. days
1 4 5 5 5 1 5 5 5 5 5 5 5 5 5 5 5 5 5 5		;	5					1 - 60 days
L'iodeman	Thorp	22	3	•••	3,800.00	428.62	3	2-60 days
Worden	Plainfield	18	~		2	-	_	1 -2 Bo.
		-	:		3.	1.80	•	

16 1-80 days	9			40	10	7			7	10 2-30 days	*	2 - 60 days	4	10 2-80 days	1 1-40 days		94	2
17.50	3.75	:	!	14.00			38	24.97	8.50	166.90	6.15	× -	8.6	169.90	28 43	10.00		\$7,023.48 893
855.00		8.8	250.50	256.00	8:3	33	38	100.00	100.00	450.00	150.88		75.00	90.099	550	100.00		\$50,885.00
			-				•					•			_	' !	•	88
1 000	_	∞ •	•	**			-	- 64	61	12	*	~~	9 00	88	=	-		1,121
2 ∞	-	∞•	.	-10		04 0	-	· 64	84	12	•		9	8	12	-		1,210
Oconomowoc	Special Warden	Special Warden	Oshkosh	Hayward	Park Falls	Sayner	Special Warden	Special Warden	Special Warden	Argonne	Brule	Cagle Kiver	Special Warden	Laona	Special Warden	Special Warden		Totals
Tuttle	Brach	Cartaon	Chase	Clawson	fft	ong, F. J.	McDonald P A	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				Potent.	Reed	: :	Wademen Kenneth	Weaver P. E.		

Per cent of cases won. 92.69
Per cent of cases won. 70.46
Per cent of cases lost. 70.40
Average fine per case won. \$45.6

Individual Wardens Records 1927-1928

Warden	District	Cases	Cases Won	Lost	Pines	Costs	Setzures	Seizures Jali Sentences
MacKenzie.	Antigo	11	10	1	\$675.00	\$79.20	8	1-25 days
Boomer	Oshkosh	82	8	81	1,126.00	170.19	12	1—60 days
Elliott	Whitewater Madison	25.25	22	-	3,455.00	393.07	7.4	1 - 80 days
Keaver, E. M.		6 23	э <u>2</u>		100.00	7.80 58.95	28	7-80 days

WISCONSIN CONSERVATION COMMISSION

			_	_				
4	Hayward	4.6	4.0		\$125.00	\$18.25	873	
	Sau Claire	£ 4	46	-	1,195.00	338.35	5.5	
	Special Warden	ıΩ	63	89		1		2-30 days
Baie, A. A	Aarinette	35	35		1,315.00	127.47	22	
	Merrill	16	16	1.	650.00	91.72	•	
Ohase	Nancer Jahkosh	23	21	8	800.00	81.26	12	2-30 days
	Crandon	_	-		20.00	7.15		T—SO OWAS
	Visconsin Rapids.	00	∞		475.00	182.29	13	
	wausau /iroqua	12	27	1	450.00 450.00	90.48 91.76	. w	
	Special Warden	10	8	2	250.00	50.74	12	2-30 days
Devine, T.	pooner	01 ñ	01 T		50.00	2.50 145.50	e0 o	1-30 days
; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	Saraboo	100	161		960.00	123.35	2	1-30 days
O	Dahkosh	. 29	72	67	1,550.00	185.13	17	1-20 days
dick	aona	9	9		250.00	38.06	13	
	Manitowoc.	9	4	63	150.00	10.88		1-60 days
Saher O	Oconto Falls	16	16		600.00	29.30	°2	2—60 days
Posmot	omahawk	=	=		420.00	61.59	9	1-40 days
S	Special Warden				•			1-60 days
	filwaukee	63	2		50.00	8.80		
desei	ountain City	118	25	٦.	325.00	25.00		2-30 days
9 00	habayan	\$ -	5=	-	525.00	146 18	b <u>-</u>	1-80 days
	shland		· 60		400.00	21.19		1-30 days
	pecial Warden.	17	42	10	200.00	21.73 67.75	2	
Hamblin F	Special Warden.		-					
	ron River	18	28	9	775.00	60.79	28	3-60 days

218.71 11 2—30 days 4.34 1 1—80 days 1—60 days 1—60 days	82.38 6.50 116.74 18 2—90 days 1—60 days	225.62 4 1—6 mo. 2—60 days 48.21 28 1—60 days 99 63 29 1—60 days	1384	262.09 7 1 46.04.09 166.40 18 17 2 8.00 days		41.80 21.27 8.16 11.48 1.22.26 1 1—30 days
60.00 4 1,126.00 2 160.00 2	500.00 50.00 825.00	1,126.00		1 700.00 2 5 1,860.00 1 2,00.00		600.00 50.00 100.00
30 26	12 12 12 26 19	16 16 17		15 18 89 84 84 86 86		16 16 16 21 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Park Falls Three Lakes Two Rivers Draper	Tomah Hudson Hammond	Stevens Point	Appleton Ladysmith Blair	La Crosse. Femimore Antigo.	Sayner Mellen	Superior Special Warden La Crosse Special Warden Special Warden Special Warden
Rapett Byner Bendricken Baugen	Hülker Hope, A. Hope, L.	Hornberg. Hoaford	feske. Ohnson, E. P. Ohnson, F. J.	Kabat Keeler Kramer Lange	Long, F. J. Long, John	McNaughton Moria Moria Miller Millon, Bert Nixon, R. A.

Jail Sentences	4—30 days	1—9 mo. 2—60 days 1—60 days 4—30 days 1—60 days	8—80 days 12—60 days 9—80 days	1—80 days 1—46 days 1—56 days 1—80 days	1—60 days 6—30 days	2-80 days 1-60 days	1—90 days 2—80 days 1—60 days 8—60 days	
Seizures	∞⊢∞ 21∰.	40 I 8		6-0 6-0	27 80	16811222	01 8 11	941
Costs	127.92 6.86 169.18 9.96 72.07	180.70 180.36 120.19	329.28	72.40	156.28	11.26 154,70 148.70 405.21 106.46	84.98 4.14 89.20	\$8,623.82
Fines	\$575.00 100.00 1,247.50 50.00	1,201.00 1,525.00 925.00	1,725.00	600.00	1,825.00	100.00 875.00 2,886.00 1,026.00	686.00 50.00 706.00	\$57,068.50
Lost	- 000	-8 F 4	-	7		H .	·	78
Won	24 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	28 28	3	8-12	21	22122	1-205	1,865
Cases	848 41	75 % 8	99	12	2 2	782737	1-12-88	1,488
District	Argonne Brule Racine Racine Baycial Warden Baylede Milwaukee	waupaca. Horicon. Mercer. Eagle River.	Rhinelander	Stoughton Special Warden Rice Lake	Green Bay Star Lake Draper	Prairie du Chien Oconomowoc. Crandon Shawano Grandon Crandon Shawano	Special Warden Sturgeon Bay Sturgeon Bay Plainfield	Totals
Warden	Otto Percy Peterson, A. J. Peterson, Carl Powell Raeth.	Kandall Reabe Rheaume Riebe	Robinson	Sampson. Schwalbe Scolman.	Smith, I. G. Smith, P. R. Steiro.	Stevenson Stigitauer Stigitauer Tic Tic Redeman	Trafek Wander Kelen Wander P Worden	

r cent or cases won r cent of cases lost r cent of settures to cases won. wrage the per case won.

ANTICIPATED ACTIVITIES

With the desire to encourage sympathetic cooperation and intelligent appreciation of conservation problems in Wisconsin, the commission just at the close of the last biennium organized two new departments which will function as integral units of the commission. These two departments, the department of game and the department of education and publications, are highly important to a comprehensive and systematic conservation program.

The first of these two departments, aside from its projected activities in the propagation and distribution of native and introduced game birds, the introduction of game animals, and the furnishing of food and protection to our native birds and animals, desires to encourage a wiser use of all our wild life, regardless of its sporting value. Its intention is to preserve among the other valuable resources of the state the presence of our picturesque and highly interesting game for the future.

The department of game as one of its first functions established a game farm in Peninsula Park, in Door county. The first activity of this department will be the development of a program of ringneck pheasant propagation and distribution, because it is by the propagation of pheasants that the best immediate results may be obtained. However, extensive experiments will be made in rearing native partridge, grouse, prairie hens, ducks, wild turkeys, and quail. All of this activity, of course, will have to come gradually over a period of years, and the department's activities will expand in the future to the point where the new department of game will be just as important to the work of conservation in Wisconsin as the department of fisheries is at the present time.

The function of the department of education and publications is of a dual nature, as its work divides naturally into two major divisions—conservation education within the state and advertising Wisconsin's natural resources outside the state. Naturally, these two functions of the department will overlap considerably, but in general the material prepared for within the state consumption is educational, while that furnished by the department for consumption outside the state has as its main purpose the advertising of Wisconsin's recreational resources.

This department, aside from doing the general publicity work for the commission, will maintain contacts with schools and other educational groups throughout the state, and will handle all the publication work for the conservation commission. This latter includes the publishing of bulletins, reports, pamphlets, books, and it is anticipated that a regular monthly publication will be issued, beginning sometime

in the near future. The purpose of this department can be summed up in the statement that its work is to make the people of Wisconsin "conservation conscious" and by so doing to develop a frame of mind favorable to the successful culmination of the conservation commission's extensive program.

The establishment of a research bureau fits in closely with the work of these other two new departments. This bureau consists of a fact-finding group of technical men and skilled scientists who serve the state without pay because of their sincere interests in conservation problems. As time goes on this research bureau will prove to be more and more valuable in carrying out the programs of the other bureaus and departments. Should disease threaten the wild life, fish, game, trees, or shrubs of the state, this bureau will determine the cause and seek a remedy.

The establishment of this new bureau reflects a tendency prevalent throughout the United States of scientific investigation of matters and problems of conservation. That Wisconsin has already established such a bureau shows that the conservation commission is anxious to further the cause of conservation in every way it can, scientifically and practically.

The research bureau derives a great benefit from the work of federal investigators. There are many federal agencies engaged in research studies and fact finding, and the results of their work is always available for the use of the research bureau of the Wisconsin commission. In many cases the federal agencies have provided all of the basic work upon which can be builded a specific study of a particular problem relating to Wisconsin. In the future the cooperation of federal research agencies and state research agencies will become increasingly more important, just as the cooperation of all federal conservation activities with all state conservation activities will become more closely associated.

FINANCIAL STATEMENT

of

STATE CONSERVATION COMMISSION

Fiscal years of

July 1, 1926 to June 30, 1927

and

July 1, 1927 to June 30, 1928

FIRST YEAR OF BIENNIUM

July 1, 1926 to June 30, 1927

OPERATION

Appropriation Unexpended balance Refunds One half of rough fish receipts Total disbursements: Unexpended balance CLASSIFICATION OF DISBURSEME	\$245,675.00 27,901.25 100.00 19,750.58 \$298,426.83	\$282,660.18 10,766.65 \$298,426.83
Administration	\$41,158.62	
Forestry	8,153.19	
Parks	20 .968 .89	
Wardens	183,690.66	
Pisheries.	78,698.82	
		\$282,660.18
DETAIL OF DISBURSEMENTS		
ADMINISTRATION		
Salaries	\$24,511.86	
Supplies	8,087.00	,
Printing.	4,094.57	
rostage.	8,712.18	
Telephone and telegraph	955.80	
Express, freight and drayage	288.47	
State car expense	1 ,192 .80	
Employee's expenses	8 ,286 .69	
Advertising	25.25	
		\$41,158.62
FORESTRY		
Salaries and labor	\$4,244.62	
Supplies	2,320.25	
Employee's expenses	1.588.32	
	1,000.02	
		\$8,153.19
PARKS		
Salaries and labor	\$8,989.54	
Supplice	10,818.42	
Employee's expenses	129.25	
r gebrone	85.75	
Insurance	1.445.98	
	Dist	\$20,963.89

Denimenta Dente		
Peninsula Park	\$8,488.98	
Devils Lake Park	5.271.25	
Northern Forest Park Tower Hill Park	2 ,884 .48 788 .61	
Interstate Park	1.854.96	
Nelson Dewey Park	488.59	
Pattison Park	288.27	
Belmont Park	888.20	
Cushing Memorial Park	87.50	
Perrot Park	88.10	
_		\$20 ,968.89
-		
WARDENS		
Salaries	\$86,655.54	
Railroad fares	1.787.88	
Hotel expense	14,900.68	
Livery expense. Mileage. Other expense.	178.60	
Mileage	11 ,887 .67 2 ,984 .97	
State car expense	10,726.99	
Auto supplies.	2,852.06	
Gas and oil	444.54	
Provisions and supplies	1,298.89	
Telephone	452.05	
Insurance	521.29	
·		\$138,690.66
FISHERIES		
Salaries and labor	\$36,651.99	
Fish food.	15 ,902 .81	
Supplies	15,902.81 14,899.27 8,082.16	
Employee's expenses	8,082.16	
Telephone	606.51 1,700.06	
DrayageInsurance	1,856.02	

•		\$ 78 ,69 8 . 82
•		
FISHERIES		
- 	00 144 77	
Madison Hatchery Bayfield Hatchery	\$6,144.77 8,854.47	
Minocqua Hatchery	2 .145 .53	
Delafield Hatchery	2.819.84	
Wild Rose	7,089.08	
Sturgeon Bay Hatchery	4,007.17 8,695.57	
Sheboygan Hatchery Osceola Hatchery	11,198.44	
Eagle River Hatchery	186.40	
Spooner Hatchery	103.86	
Spooner Hatchery Westfield Hatchery	1.686.22	
Eagle River Hatchery Spooner Hatchery Westfield Hatchery Hayward Hatchery	1 ,686 .22 742 .88	
Lakewood Hatchery	1,686.22 742.88 196 17	
Lakewood Hatchery	1 ,686 .22 742 .88	
Hayward Hatchery Lakewood Hatchery Wisconsin Rapids Hatchery Eau Claire Hatchery Sparta Hatchery	1,686.22 742.88 196.17 571.74 1,084.87 1.094.02	
Hayward Hatchery Lakewood Hatchery Wisconsin Rapids Hatchery Eau Claire Hatchery Sparta Hatchery Hrula Hatchery	1,686.22 742.88 196.17 571.74 1,084.87 1,094.02 121.12	
Hayward Hatchery Lakewood Hatchery Wisconsin Rapids Hatchery Eau Claire Hatchery Sparta Hatchery Brule Hatchery Brule Hatchery Brukewood Hatchery	1,686.22 742.83 196.17 571.74 1,084.87 1,094.02 121.12 491.57	
Hayward Hatchery Lakewood Hatchery Wisconsin Rapids Hatchery Eau Claire Hatchery Sparta Hatchery Brule Hatchery Brule Hatchery Brukewood Hatchery	1,686.22 742.83 196.17 571.74 1,084.87 1,094.02 121.12 491.57 184.54	
Hayward Hatchery Lakewood Hatchery. Wisconsin Rapids Hatchery Eau Claire Hatchery. Sparta Hatchery. Brule Hatchery. Brichwood Hatchery. Oshkosh Hatchery. Tenny Park Hatchery.	1,686.22 742.88 196.17 571.74 1,084.87 1,094.02 121.12 491.57 184.54 134.84 9,581.62	
Hayward Hatchery Lakewood Hatchery. Wisconsin Rapids Hatchery Eau Claire Hatchery Sparta Hatchery Brule Hatchery Brule Hatchery Oshkosh Hatchery Tenny Park Hatchery St. Croix Falls Hatchery Collection of spawn	1,686.22 742.88 196.17 571.74 1,084.87 1,094.02 121.12 491.57 184.54 134.84 9,581.62	
Hayward Hatchery Lakewood Hatchery. Wisconsin Rapids Hatchery Eau Claire Hatchery Sparta Hatchery. Brule Hatchery. Birchwood Hatchery Oshkosh Hatchery. Tenny Park Hatchery. St. Croix Falls Hatchery.	1,686.22 742.83 196.17 571.74 1,084.87 1,094.02 121.12 491.57 134.54	
Hayward Hatchery Lakewood Hatchery. Wisconsin Rapids Hatchery Eau Claire Hatchery Sparta Hatchery Brule Hatchery Brule Hatchery Oshkosh Hatchery Tenny Park Hatchery St. Croix Falls Hatchery Collection of spawn	1,686.22 742.88 196.17 571.74 1,084.87 1,094.02 121.12 491.57 184.54 134.84 9,581.62	\$78,698.83
Hayward Hatchery Lakewood Hatchery. Wisconsin Rapids Hatchery Eau Claire Hatchery Sparta Hatchery Brule Hatchery Brule Hatchery Oshkosh Hatchery Tenny Park Hatchery St. Croix Falls Hatchery Collection of spawn	1,686.22 742.88 196.17 571.74 1,084.87 1,094.02 121.12 491.57 184.54 134.84 9,581.62	\$78,695.83
Hayward Hatchery Lakewood Hatchery. Wisconsin Rapids Hatchery Eau Claire Hatchery Sparta Hatchery Brule Hatchery Brule Hatchery Oshkosh Hatchery Tenny Park Hatchery St. Croix Falls Hatchery Collection of spawn	1,686.22 742.88 196.17 571.74 1,084.87 1,094.02 121.12 491.57 184.54 134.84 9,581.62	\$78,698.83
Hayward Hatchery Lakewood Hatchery. Wisconsin Rapids Hatchery Eau Claire Hatchery Sparta Hatchery Brule Hatchery Brule Hatchery Oshkosh Hatchery Tenny Park Hatchery St. Croix Falls Hatchery Collection of spawn Distribution of fish	1,686.22 742.83 196.17 571.74 1,084.87 1,094.02 121.12 491.57 134.54 9,581.62 5,643.16	\$78,698.82
Hayward Hatchery Lakewood Hatchery Wisconsin Rapids Hatchery Eau Claire Hatchery Sparta Hatchery Brule Hatchery Brule Hatchery Oshkosh Hatchery Oshkosh Hatchery Tenny Park Hatchery St. Croix Falls Hatchery Collection of spawn Distribution of fish	1,686.22 742.83 196.17 571.74 1,084.37 1,094.02 121.12 491.57 134.54 9,581.62 5,643.16 11,021.99	\$78,698.83
Hayward Hatchery Lakewood Hatchery. Wisconsin Rapids Hatchery Eau Claire Hatchery. Sparta Hatchery. Bruls Hatchery. Brichwood Hatchery Oshkosh Hatchery Tenny Park Hatchery. St. Croix Falls Hatchery. Collection of spawn Distribution of fish REPAIRS AND MAINTENANC!	1,686.22 742.83 196.17 571.74 1,084.87 1,094.02 491.57 134.54 134.84 9,581.62 5,643.16 11,021.99	\$78,696.82
Lakewood Hatchery. Lakewood Hatchery. Wisconsin Rapids Hatchery. Eau Claire Hatchery. Sparta Hatchery. Brule Hatchery. Brichwood Hatchery. Oshkosh Hatchery. Tenny Park Hatchery. St. Croix Falls Hatchery. Collection of spawn. Distribution of fish. REPAIRS AND MAINTENANC! Appropriation. Unexpended balance	1,686.22 742.83 196.17 571.74 1,084.87 1,094.02 121.12 491.57 134.54 9,581.62 5,643.16 11,021.99	
Hayward Hatchery Lakewood Hatchery. Wisconsin Rapids Hatchery Eau Claire Hatchery. Sparts Hatchery. Brule Hatchery. Brule Hatchery. Brichwood Hatchery Oshkosh Hatchery Tenny Park Hatchery. St. Croix Falls Hatchery. St. Croix Falls Hatchery. Distribution of fish. REPAIRS AND MAINTENANC! Appropriation. Unexpended balance Refunds.	1,686.22 742.83 196.17 571.74 1,084.87 1,094.02 491.57 134.54 134.84 9,581.62 5,643.16 11,021.99	99, 408, 78
Lakewood Hatchery. Lakewood Hatchery. Wisconsin Rapids Hatchery. Eau Claire Hatchery. Sparta Hatchery. Brule Hatchery. Brule Hatchery. Oshkosh Hatchery. Tenny Park Hatchery. St. Croix Falls Hatchery. Collection of spawn. Distribution of fish. REPAIRS AND MAINTENANC! Appropriation Unexpended balance Refunds. Total disbursements.	1,686.22 742.83 196.17 571.74 1,084.87 1,094.02 121.12 491.57 134.54 9,581.62 5,643.16 11,021.99	\$78,698.83 22,408.78 18.10
Hayward Hatchery Lakewood Hatchery. Wisconsin Rapids Hatchery Eau Claire Hatchery. Sparts Hatchery. Brule Hatchery. Brule Hatchery. Brichwood Hatchery Oshkosh Hatchery Tenny Park Hatchery. St. Croix Falls Hatchery. St. Croix Falls Hatchery. Distribution of fish. REPAIRS AND MAINTENANC! Appropriation. Unexpended balance Refunds.	1,686.22 742.83 196.17 571.74 1,084.87 1,094.02 121.12 1491.57 184.54 184.84 9,681.62 5,643.16 11,021.99	22 ,406.78 18.10
Lakewood Hatchery. Lakewood Hatchery. Wisconsin Rapids Hatchery. Eau Claire Hatchery. Sparta Hatchery. Brule Hatchery. Brule Hatchery. Oshkosh Hatchery. Tenny Park Hatchery. St. Croix Falls Hatchery. Collection of spawn. Distribution of fish. REPAIRS AND MAINTENANC! Appropriation Unexpended balance Refunds. Total disbursements.	1,686.22 742.83 196.17 571.74 1,084.87 1,094.02 121.12 491.57 134.54 9,581.62 5,643.16 11,021.99	99, 408, 78
Hayward Hatchery Lakewood Hatchery. Wisconsin Rapids Hatchery Eau Claire Hatchery. Brata Hatchery Brils Hatchery. Brichwood Hatchery Oshkosh Hatchery Tenny Park Hatchery. St. Croix Falls Hatchery Collection of spawn Distribution of fish REPAIRS AND MAINTENANC Appropriation Unexpended balance Refunds. Total disbursements Unexpended balance	1,686.22 742.83 196.17 571.74 1,084.87 1,094.02 121.12 1491.57 184.54 184.84 9,681.62 5,643.16 11,021.99	22 ,408.78 18.10

CLASSIFICATION OF DISBURSEME		
Administration	\$32.40	
Forestry	3 ,219 .01 5 ,602 .75	
Wardens	412.86	
Pisheries	412.86 18,141.71	
•		\$22,408.78
•		
PARKS	e0 00E 07	
Peninsula Park Devils Lake Park Northern Forest Park	\$2,285.07 1,194.85	
Northern Forest Park	988.40	
Tower Hill Park	306.51	
Interstate Park	500.32	
Pattison Park	174.00 116.50	
Nelson Dewey Park Pattison Park Belmont Park	116.50 87.10	
·		\$5,602.75
FISHERIES		
Madison Hatchery	\$1,666.64	
Bayfield Hatchery Minocqua Hatchery	\$1,666.64 2,684.81	
Minocqua Hatchery	544.87 1,068.61	
Delafield Hatchery Wild Rose Hatchery	1,790.57	
Sturgeon Bay Hatchery. Sheboygan Hatchery	698.83	•
Sheboygan Hatchery	566.04	
Uscaola Hatchery	2,028.98	
Eagle River Hatchery Spooner Hatchery	20.70 49.70	
Ean Claire Hatchery	6.10	
Eau Claire Hatchery Oakkosh Hatchery	5.00	
St. Croix Falls Hatchery Distribution of fish	1 ,962 .25 59 .66	
Describution of Han	09.00	e19 141 71
		\$13,141.71
PROPERTY AND IMPROVEMENT	004 AEA AA	
Appropriation Unexpended balance Total disbursements		
Appropriation	\$84 ,650.00 644.60	\$33,570.69 1,728.91
Appropriation Unexpended balance Total disbursements	004 AEA AA	
Appropriation Unexpended balance Total disbursements	\$34,650.00 644.60 \$35,294.60	\$33,570.69 1,728.91
Appropriation Unexpended balance Total disbursements Unexpended balance CLASSIFICATION OF DISBURSEME	\$34,650.00 644.60 \$35,294.60 ENTS \$240.38	\$33,570.69 1,728.91
Appropriation Unexpended balance Total disbursements Unexpended balance CLASSIFICATION OF DISBURSEME	\$34,650.00 644.60 \$35,294.60 ENTS \$240.38 841.04	\$33,570.69 1,728.91
Appropriation Unexpended balance Total disbursements Unexpended balance CLASSIFICATION OF DISBURSEME	\$34,650.00 644.60 \$35,294.60 ENTS \$240.38 841.04 10,678.28	\$33,570.69 1,728.91
Appropriation Unexpended balance Total disbursements Unexpended balance CLASSIFICATION OF DISBURSEME	\$34,650.00 644.60 \$35,294.60 ENTS \$240.38 841.04	\$33,570.69 1,728.91
Appropriation Unexpended balance Total disbursements Unexpended balance CLASSIFICATION OF DISBURSEME Administration Forestry Parks Wardens	\$34,650.00 644.60 \$35,294.60 ENTS \$240.38 841.04 10,678.28	\$33,570.69 1,728.91
Appropriation Unexpended balance Total disbursements Unexpended balance CLASSIFICATION OF DISBURSEME Administration Forestry Parks Wardens	\$34,650.00 644.60 \$35,294.60 ENTS \$240.38 841.04 10,678.28	\$53,570.69 1,723.91 \$35,294.60
Appropriation Unexpended balance Total disbursements Unexpended balance CLASSIFICATION OF DISBURSEME Administration Forestry Parks Wardens Fisheries PARKS Peninsula Park	\$34,650.00 644.60 \$35,294.60 ENTS \$240.38 841.04 10,678.28 1,083.02 20,727.97	\$53,570.69 1,723.91 \$35,294.60
Appropriation Unexpended balance Total disbursements Unexpended balance CLASSIFICATION OF DISBURSEME Administration Forestry Parks Wardens Fisheries PARKS Peninsula Park Devils Lake Park	\$34,650.00 644.60 \$35,294.60 ENTS \$240.88 841.04 10,678.28 1,083.02 20,727.97	\$53,570.69 1,723.91 \$35,294.60
Appropriation Unexpended balance Total disbursements Unexpended balance CLASSIFICATION OF DISBURSEME Administration Forestry Parks Wardens Fisheries PARKS Peninsula Park Devils Lake Park Northern Forest Park	\$34,650.00 644.60 \$35,294.60 ENTS \$240.38 841.04 10,678.28 1,083.02 20,727.97 \$859.76 3,975.48 193.14	\$53,570.69 1,723.91 \$35,294.60
Appropriation Unexpended balance Total disbursements Unexpended balance CLASSIFICATION OF DISBURSEME Administration Forestry Parks Wardens Fisheries PARKS Peninsula Park Devils Lake Park Northern Forest Park Tower Hill Park	\$34,650.00 644.60 \$35,294.60 ENTS \$240.38 841.04 10,678.28 1,083.02 20,727.97 \$859.76 3,975.48 193.14 15.87	\$53,570.69 1,723.91 \$35,294.60
Appropriation Unexpended balance Total disbursements Unexpended balance CLASSIFICATION OF DISBURSEME Administration Forestry Parks Wardens Fisheries PARKS Peninsula Park Devils Lake Park Northern Forest Park Tower Hill Park Interestate Park	\$34,650.00 644.60 \$35,294.60 ENTS \$240.38 841.04 10,678.28 1,083.02 20,727.97 \$859.76 3,975.48 193.14 15.87 2,591.82	\$53,570.69 1,723.91 \$35,294.60
Appropriation Unexpended balance Total disbursements Unexpended balance CLASSIFICATION OF DISBURSEME Administration Forestry Parks Wardens Fisheries PARKS Peninsula Park Devils Lake Park Northern Forest Park Tower Hill Park Interstate Park Nelson Dewey Park Nelson Dewey Park Pattienn Park	\$34,650.00 644.60 \$35,294.60 ENTS \$240.38 841.04 10,678.28 1,083.02 20,727.97 \$859.76 3,975.48 193.14 15.87 2,591.32 2,013.19	\$53,570.69 1,723.91 \$35,294.60
Appropriation Unexpended balance Total disbursements Unexpended balance CLASSIFICATION OF DISBURSEME Administration Forestry Parks Wardens Fisheries PARKS Peninsula Park Devils Lake Park Northern Forest Park Tower Hill Park Interstate Park Nelson Dewey Park Nelson Dewey Park Pattienn Park	\$34,650.00 644.60 \$35,294.60 ENTS \$240.38 841.04 10,678.28 1,083.02 20,727.97 \$859.76 3,975.48 193.14 15.87 2,591.32 2,013.19	\$53,570.69 1,723.91 \$35,294.60
Appropriation Unexpended balance Total disbursements Unexpended balance CLASSIFICATION OF DISBURSEME Administration Forestry Parks Wardens Fisheries PARKS Peninsula Park Devils Lake Park Northern Forest Park Tower Hill Park Interntate Park Nelson Dewey Park Pattison Park Beimont Park Beimont Park Cushing Memorial Park Cushing Memorial Park	\$34,650.00 644.60 \$35,294.60 ENTS \$240.38 841.04 10,678.28 1,083.02 20,727.97 \$859.76 3,975.48 193.14 195.14 195.14 195.12 196.13 198.14	\$53,570.69 1,723.91 \$35,294.60
Appropriation Unexpended balance Total disbursements Unexpended balance CLASSIFICATION OF DISBURSEME Administration Forestry Parks Wardens Fisheries PARKS Peninsula Park Devils Lake Park Northern Forest Park Tower Hill Park Interstate Park Nelson Dewey Park Nelson Dewey Park Pattienn Park	\$34,650.00 644.60 \$35,294.60 ENTS \$240.38 841.04 10,678.28 1,083.02 20,727.97 \$859.76 3,975.48 193.14 195.14 195.14 195.12 196.13 198.14	\$53,570.69 1,723.91 \$35,294.60
Appropriation Unexpended balance Total disbursements Unexpended balance CLASSIFICATION OF DISBURSEME Administration Forestry Parks Wardens Fisheries PARKS Peninsula Park Devils Lake Park Northern Forest Park Tower Hill Park Interstate Park Nelson Dewey Park Pattison Dewey Park Pattison Park Cushing Memorial Park Perrot Park FISHERIES	\$34,650.00 644.60 \$35,294.60 ENTS \$240.38 841.04 10,678.28 1,083.02 20,727.97 \$859.76 3,975.48 193.14 15.87 2,591.32 2,013.19 653.28 142.80 198.14 35.30	\$33,570.69 1,723.91 \$35,294.60
Appropriation Unexpended balance Total disbursements Unexpended balance CLASSIFICATION OF DISBURSEME Administration Forestry Paris Wardens Fisheries PARKS Peninsula Park Devils Lake Park Northern Forest Park Tower Hill Park Interstate Park Nelson Dewey Park Pattison Park Elemont Park Cushing Memorial Park Perrot Park FISHERIES Maddson Hatchery Barfield Hatchery Barfield Hatchery Barfield Hatchery Barfield Hatchery Barfield Hatchery Barfield Hatchery Barfield Hatchery	\$34,650.00 644.60 \$35,294.60 \$240.38 841.04 10,678.28 1,083.02 20,727.97 \$859.76 3,975.48 193.14 15.87 2,013.19 653.28 142.80 198.14 35.30	\$33,570.69 1,723.91 \$35,294.60
Appropriation Unexpended balance Total disbursements Unexpended balance CLASSIFICATION OF DISBURSEME Administration Forestry Parks Wardens Fisheries PARKS Peainsula Park Devils Lake Park Northern Forest Park Interstate Park Netson Dewey Park Pattison Park Pattison Park Cushing Memorial Park Perrot Park FISHERIES Madison Hatchery Barfield Hatchery Barfield Hatchery Barfield Hatchery Barfield Hatchery Barfield Hatchery	\$34,650.00 644.60 \$35,294.60 \$240.38 841.04 10,678.28 1,083.02 20,727.97 \$859.76 3,975.48 193.14 15.87 2,013.19 653.28 142.80 198.14 35.30	\$33,570.69 1,723.91 \$35,294.60
Appropriation Unexpended balance Total disbursements Unexpended balance CLASSIFICATION OF DISBURSEME Administration Forestry Parks Wardens Fisheries PARKS Peninsula Park Devils Lake Park Northern Forest Park Tower Hill Park Interstate Park Neison Dewey Park Pattison Park Belmont Park Cushing Memorial Park Perrot Park FISHERIES Madison Hatchery Bayfield Hatchery Minocqua Hatchery Minocqua Hatchery Minocqua Hatchery Delafield Hatchery	\$34,650.00 644.60 \$35,294.60 \$240.38 \$41.04 10,678.28 1,083.02 20,727.97 \$859.76 3,975.48 198.14 15.87 2,591.32 2,013.19 653.28 142.80 198.14 35.30	\$33,570.69 1,723.91 \$35,294.60
Appropriation Unexpended balance Total disbursements Unexpended balance CLASSIFICATION OF DISBURSEME Administration Forestry Parks Wardens Fusheries PARKS Peninsula Park Devils Lake Park Northern Forest Park Tower Hill Park Interstate Park Nelson Dewey Park Pattison Park Cushing Memorial Park Perrot Park Cushing Memorial Park Perrot Park Madison Hatchery Bayfield Hatchery Bayfield Hatchery Minocque Hatchery Minocque Hatchery Minocque Hatchery Minocque Hatchery Minocque Hatchery Minocque Hatchery Minocque Hatchery Minocque Hatchery Minocque Hatchery Minocque Hatchery Minocque Hatchery Minocque Hatchery Minocque Hatchery Minocque Hatchery Minocque Hatchery Minocque Hatchery Minocque Hatchery Minocque Hatchery	\$34,650.00 644.60 \$35,294.60 ENTS \$240.38 841.04 10,678.28 1,083.02 20,727.97 \$859.76 3,975.48 193.14 15.87 2,591.32 2,013.19 653.28 142.80 142.80 144.13 255.67	\$33,570.69 1,723.91 \$35,294.60

Sheboygan Hatchery Osceola Hatchery	\$6.35 2,402.82	
Eagle River Hatchery	83.00	
Eagle River Hatchery Westfield Hatchery	50.25	
Hayward Hatchery	283.16 2,380.84	
Sparta Hatchery	889.70	
Brule Hatchery Birchwood Hatchery	820.95 788.82	
St. Croix Falls Hatchery	4.042.06	
St. Croix Falls Hatchery Collection of spawn	1,722.88 2,408.25	
Distribution of fish	2,408.25	
		\$20 ,727 . 97
BOUNTIES		
Total disbursements		\$60,684.00
		\$60,684.00
•		
EMERGENCY FIRE WARDENS	}	
Total disbursements		\$11,709.92
· ·		\$11,709.92
PARK PURCHASE FUND	_	
Unexpended balance	\$2,028.07 5,207.25	
Receipts for year.	5 ,207 .25	AF 109 00
Disbursements Unexpended balance		\$5 ,183 .89 2 ,046 .43
	\$7,280.82	\$7 ,280 . 82
	\$1,200.02	\$1,200.02
CLASSIFICATION OF DISBURSEME	WTQ	
Supplies	111115	\$5 ,188 .89
		\$5,183.89
LAND EXCHANGE FUND	•	
Unexpended balance	\$25,000.00	
Unexpended balance Disbursements.	\$25,000.00	
Unexpended balance	\$25,000.00	\$25,000.00
Dispursements	\$25,000.00 \$25,000.00	\$25,000.00
Dispursements		
Unexpended balance. SANITATION—Interstate Park		
Unexpended balance. SANITATION—Interstate Park Unexpended balance.		/\$25 ,000 .00
Unexpended balance. SANITATION—Interstate Park	\$25,000.00	
Unexpended balance. SANITATION—Interstate Park Unexpended balance.	\$25,000.00	/\$25 ,000 .00
Unexpended balance. SANITATION—Interstate Park Unexpended balance. Disbursements.	\$25,000.00 \$1,513.85 \$1,513.85	/\$25 ,000 .00 \$1 ,613 .85
Unexpended balance. SANITATION—Interstate Park Unexpended balance. Disbursements CLASSIFICATION OF DISBURSEME	\$25,000.00 \$1,513.85 \$1,513.85	\$25,000.00 \$1,513.85 \$1,513.86
Unexpended balance. SANITATION—Interstate Park Unexpended balance. Disbursements. CLASSIFICATION OF DISBURSEME Salaries and labor.	\$25,000.00 \$1,513.85 \$1,513.85	\$25,000.00 \$1,513.85 \$1,518,86 \$1,026.80
Unexpended balance. SANITATION—Interstate Park Unexpended balance. Disbursements CLASSIFICATION OF DISBURSEME	\$25,000.00 \$1,513.85 \$1,513.85	\$25,000.00 \$1,513.85 \$1,513.85 \$1,026.80 487.05
Unexpended balance. SANITATION—Interstate Park Unexpended balance. Disbursements. CLASSIFICATION OF DISBURSEME Salaries and labor.	\$25,000.00 \$1,513.85 \$1,513.85	\$25,000.00 \$1,513.85 \$1,518,86 \$1,026.80
SANITATION—Interstate Park Unexpended balance Disbursements CLASSIFICATION OF DISBURSEME Salaries and labor Supplies	\$25,000.00 \$1,518.85 \$1,513.85 CNTS	\$25,000.00 \$1,513.85 \$1,513.85 \$1,026.80 487.05
SANITATION—Interstate Park Unexpended balance Disbursements CLASSIFICATION OF DISBURSEME Salaries and labor Supplies FIRE PREVENTION AND CONTROL—WI	\$25,000.00 \$1,518.85 \$1,513.85 CNTS	\$25,000.00 \$1,513.85 \$1,513.85 \$1,026.80 487.05
SANITATION—Interstate Park Unexpended balance. CLASSIFICATION OF DISBURSEME Salaries and labor. Supplies. FIRE PREVENTION AND CONTROL—WI	\$25,000.00 \$1,518.85 \$1,518.85 CNTS CEEKS LAW \$6,884.21	\$25,000.00 \$1,513.85 \$1,513.85 \$1,026.80 487.05
SANITATION—Interstate Park Unexpended balance Disbursements CLASSIFICATION OF DISBURSEME Salaries and labor Supplies FIRE PREVENTION AND CONTROL—WI Unexpended balance Refundursed by U. S. Gov't Refunds	\$25,000.00 \$1,518.85 \$1,513.85 CNTS	\$25,000.00 \$1,513.85 \$1,513.85 \$1,026.80 487.05 \$1,513.85
SANITATION—Interstate Park Unexpended balance CLASSIFICATION OF DISBURSEME Salaries and labor Supplies FIRE PREVENTION AND CONTROL—WI Unexpended balance Reimbursed by U. S. Gov't Refunds Disbursements	\$25,000.00 \$1,518.85 \$1,518.85 CNTS CEKS LAW \$6,884.21 25,121.50	\$25,000.00 \$1,513.85 \$1,513.85 \$1,026.80 487.05 \$1,513.85
SANITATION—Interstate Park Unexpended balance Disbursements CLASSIFICATION OF DISBURSEME Salaries and labor Supplies FIRE PREVENTION AND CONTROL—WI Unexpended balance Refunds Refunds	\$25,000.00 \$1,518.85 \$1,513.85 CNTS CNTS CEKS LAW \$6,884.21 25,121.50 71.76	\$1,513.85 \$1,513.85 \$1,513.85 \$1,026.80 487.05 \$1,513.85
SANITATION—Interstate Park Unexpended balance CLASSIFICATION OF DISBURSEME Salaries and labor Supplies FIRE PREVENTION AND CONTROL—WI Unexpended balance Reimbursed by U. S. Gov't Refunds Disbursements	\$25,000.00 \$1,518.85 \$1,518.85 CNTS CEKS LAW \$6,884.21 25,121.50	\$25,000.00 \$1,513.85 \$1,513.85 \$1,026.80 487.05 \$1,513.85
SANITATION—Interstate Park Unexpended balance CLASSIFICATION OF DISBURSEME Salaries and labor Supplies FIRE PREVENTION AND CONTROL—WI Unexpended balance Reimbursed by U. S. Gov't Refunds Disbursements Unexpended balance	\$25,000.00 \$1,518.85 \$1,513.85 CNTS EEKS LAW \$6,884.21 25,121.50 71.76	\$1,513.85 \$1,513.85 \$1,513.85 \$1,026.80 487.05 \$1,513.85
SANITATION—Interstate Park Unexpended balance CLASSIFICATION OF DISBURSEME Salaries and labor Supplies FIRE PREVENTION AND CONTROL—WI Unexpended balance Reimbursed by U. S. Gov't Refunds Unexpended balance CLASSIFICATION OF DISBURSEME	\$25,000.00 \$1,518.85 \$1,513.85 CNTS EEKS LAW \$6,884.21 25,121.50 71.76	\$1,513.85 \$1,513.85 \$1,513.85 \$1,513.85 \$1,513.85 \$1,513.85
SANITATION—Interstate Park Unexpended balance. CLASSIFICATION OF DISBURSEME Salaries and labor. Supplies. FIRE PREVENTION AND CONTROL—WI Unexpended balance. Refunds. Disbursements. Unexpended balance. CLASSIFICATION OF DISBURSEME Salaries and labor.	\$25,000.00 \$1,518.85 \$1,513.85 CNTS EEKS LAW \$6,884.21 25,121.50 71.76	\$1,513.85 \$1,513.85 \$1,513.85 \$1,513.85 \$1,513.85 \$1,513.85
SANITATION—Interstate Park Unexpended balance CLASSIFICATION OF DISBURSEME Salaries and labor Supplies FIRE PREVENTION AND CONTROL—WI Unexpended balance Reimbursed by U. S. Gov't Refunds Unexpended balance CLASSIFICATION OF DISBURSEME	\$25,000.00 \$1,518.85 \$1,513.85 CNTS EEKS LAW \$6,884.21 25,121.50 71.76	\$1,513.85 \$1,513.85 \$1,513.85 \$1,026.80 487.05 \$1,513.85
SANITATION—Interstate Park Unexpended balance Disbursements CLASSIFICATION OF DISBURSEME Salaries and labor Supplies FIRE PREVENTION AND CONTROL—WI Unexpended balance Reimbursed by U. S. Gov't Refunds Disbursements Unexpended balance CLASSIFICATION OF DISBURSEME Salaries and labor Supplies	\$25,000.00 \$1,518.85 \$1,513.85 CNTS EEKS LAW \$6,884.21 25,121.50 71.76	\$1,513.85 \$1,513.85 \$1,513.86 \$1,513.86 \$1,026.80 487.05 \$1,513.85 \$1,513.85

FIRE PROTECTION		•
Appropriation	\$25,000.00 21.98	
Disbursements. Unexpended balance.	,	\$25,021.88 .05
_	\$25,021.98	\$25,021.98
<u> </u>		/
CLASSIFICATION OF DISBURSEME Salaries and labor	NTS	€18 215 88
Supplies Employee's expenses		\$18,215.88 2,178.99
Employee's expenses		4,448.56 188.95
-	•	\$25,021.88
DEVILS LAKE BOAT FUND		
Unexpended balance	\$2,180.36	
Receipts for year	1,404.20	*0.40 .00
Unexpended balance		\$949.69 2,584.87
	\$3,534.56	\$3,584.56
CLASSIFICATION OF DISBURSEME	NTS	
Salaries and labor		\$614.12
Supplies		335.57
		\$949.69
REMOVAL OF ROUGH FISH—NORTHER	JWATEDQ	
Unexpended balance	\$9,120.16	
Refund	9.00	** *** **
Disbursements	1	\$8,045.88 1,083.28
•	\$9,129.16	\$9,129.16
•		
CLASSIFICATION OF DISBURSEM	Ents	
Salaries and labor		\$4,978.02 2,219.89
Employee's expenses.	•	721.47
Drayage		127.00
		\$8,045.88
FOREST NURSERY		
Appropriation	\$4,000.00 2,415.21	
Unexpended balance Rafund	48.00	
Disbursements		\$6,461.28 1.98
	\$6,468.21	\$6,463.21
CLASSIFICATION OF DISBURSEM	ENTS	\$3 ,268 . 13
Minnise		2,684.52 487.18
Employee's expenses. Printing	•	487.18 21.45
		\$6,461.28
		40,101.20
REMOVAL OF ROUGH FISH—WINNEBAG		
Appropriation	\$10,000.00	
Unexpended balance Rough fish receipts	1,671.52 995.26	
Disbursements Usespended balance	_	\$5,809.01 6,857.77
	\$12,666.78	\$12,666.78

CLASSIFICATION OF DISBURSEM Salaries and labor	•	\$8 ,871.6 1 ,404.7 528.6
Drayage		
MISSISSIPPI RIVER FISH RESCUE Unexpended balance One half rough fish receipts Refund Disbursements Unexpended balance	\$5,024.88 19,750.58 242.10	\$16 ,401 .64 8 ,615 .40
	\$25,017.06	\$25,017.06
CLASSIFICATION OF DISBURSEMI Salaries and laborSuppliesEmployee's expenses TelephoneDrayage		\$11,542.51 8,601.48 1,168.77 54.90 84.00
,		\$16,401.66
POLLUTION OF STREAMS Appropriation Unexpended balance Disbursements Unexpended balance		\$12,875.44 2,132.87
•	\$14,507.81	\$14,507.81
CLASSIFICATION OF DISBURSEME Salaries and labor Supplies Employee's expenses Printing PARK ROADS		\$9,408.77 298.34 2,493.18 175.15 \$12,875.44
Appropriation Unexpended balance Unexpended balance Unexpended balance	\$50,000.00 62,899.28	\$50 ,740.65 62 ,158.63
	\$112,899.28	\$112 ,899 .28
CLASSIFICATION OF DISBURSEME Salaries and labor. Supplies. Employees expenses	NTS	\$19,066.48 81,509.99 164.28 \$50,740.65
GOVERNMENT REFORESTATION F Unexpended balance	UND \$4,121.29 8,655.21	\$4 ,898 .76 2 ,882 .80
	\$7,776.50	\$7,776.50
CLASSIFICATION OF DISBURSEME Salaries and labor Supplies Employee's expenses	NTS	\$2,750.50 1,918.54 234.66 \$4,898.70
_		

	FIRE LOSS—VILAS COUNTY HOU	SE .	
Disbursements		\$180.00	\$177.72 2.28
		\$180.00	\$180.00
	CLASSIFICATION OF DISBURSEME	NTO.	
Supplies		MID	\$177.72
	, -		\$177.72
_			
Unexpended belance.	TIRE LOSS—NETS—MINOCQUA HATO	#811.40	
Unexpended balance.			\$311.40
	-	\$811.40	\$811.40
Unexpended balance.	FIRE LOSS—TOMAHAWK LAKE CA	BIN \$3,150.00	1 707 99
Unexpended balance.			1 ,707 .28 1 ,442 .77
	·	\$8,150.00	\$8,150.00
	CLASSIFICATION OF DISBURSEME	NTS	•
Supplies		2120	\$1,707.28
	_		\$1,707.28
			16
emerger	ICY APPROPRIATION FROM CONSE Equipping Additions: Fire Districts		ND
Unexpended balance. Disbursements		\$40,000.00	\$29 558 74
Unexpended balance.		•, •.	\$29,558.74 10,446.26
	-	\$40,000.00	\$40,000.00
	CLASSIFICATION OF DISBURSEME	NTS	
Salaries and labor			\$5,889.22 22,920.77
Employee's expenses.	***************************************	,	798.75
•			\$29 ,558 .74
EMERGE	NCY APPROPRIATION FROM CONSE	RVATION FI	ND.
	Land for Hatchery-Marquette Cou	nty	
Unexpended balance. Disbursements		\$5 ,900 .00	\$5,900.00
	-	\$5,900.00	\$5,900.00
Land	CLASSIFICATION OF DISBURSEME	INTS	\$5 ,900 . 00
	·		\$5,900.00
	•		
EMERGE	NCY APPROPRIATION FROM CONSE Additional Conservation Warden		IND
Unespended balance		\$25,000.00	
·		#0E 000 00	\$25,000.00
		\$25,000.00	\$25,000.00

CLASSIFICATION OF DISBURSEME	ENTS	
Salaries		\$16.718.62
Employee's expenses.		\$16,718.62 8,256.88
Supplies.		25.00
•		\$25,000.00
		420,000.00
EMERGENCY APPROPRIATION FROM CONSE	DVATION PI	IN D
		JND
Mississippi River Fish Hatchery Si		
Unexpended balance	\$20,000.00	
Disbursements		\$20,000.00
Onespenden seminoren		
	\$20,000.00	\$20,000.00
•		
CHAPTER NO. 858 LAWS OF 1928	,	
Fish Hatchery in Eau Claire Cour	ity	
Unexpended balance	\$8,500.00	
Disbursements	4 0 , 000.00	\$3,500.00
-	40. 740. 44	
	\$3,500.00	\$8 ,500 .00
•		
CLASSIFICATION OF DISBURSEME	NTS	
Salaries and labor		\$665.00 2,750.79
Supplies		2,750.79
Employes expenses.		84.21
	•	\$3,500.00
. RECEIPTS		
Nonresident fishing licenses.		. \$196,745.90
Fish shipping coupons		. 10 ,284.20
Nonresident fishing licenses Fish shipping coupons Nonresident hunting licenses Resident hunting licenses		. 14,025.00
Settler's hunting licenses		191.02
Dunlicate licenses		225.00
Great Lakes fishing licenses		7 ,948 .50
Duplicate licenses. Great Lakes fishing licenses. Mississippi River fishing licenses.		2 ,596.00 39 ,501.16
Rough fish		X9 .501 .16
Confiscations Warden fees		
Trapping licenses		18.784.18
Trap tags.		2 ,289 .31 18 ,784 .18 18 ,790 .30 23 ,665 .00
Trap tags		23,665.00
Set line licenses		. 1,990.ZĢ
Guide licenses		554.00 1,100.00
Fish Dealer licenses		1 140 00
Clamming licenses Decoy bands		1,117.66
Miscellaneous		. 12,572.71
Interest on fund		. 13,402.90
Refunds		663.76 811.40
Insurance receipts		E 907 95
		1 .404 .20
Devils Lake Boat fund		25 ,193.26
Devils Lake Boat fund. Fire control (Weeks Law)		
Devils Lake Boat fund	· · · · · · · · · · · · · · · · · · ·	8 ,655.21
Devils Lake Boat fund	· · · · · · · · · · · · · · · · · · ·	8,650.21
Devils Lake Boat fund	• • • • • • • • • • • • • • • • • • • •	8,655.21 \$585,408.08
Devils Lake Boat fund. Fire control (Weeks Law). Reforestation receipts		8,650.21
Devils Lake Boat fund. Fire control (Weeks Law) Reforestaion receipts CONSERVATION FUND	• • • • • • • • • • • • • • • • • • • •	8,650.21
Devils Lake Boat fund. Fire control (Weeks Law) Reforestaion receipts CONSERVATION FUND	• • • • • • • • • • • • • • • • • • • •	8,650.ZI
Deviis Lake Boat fund. Fire control (Weeks Law). Reforestation receipts CONSERVATION FUND Unexpended balance. Receipts.	3522 ,279 .58 567 .875 .28	8,650.21
Devils Lake Boat fund. Fire control (Weeks Law) Reforestation receipts CONSERVATION FUND Unexpended balance Receipts. Interest on fund Refunds on disbursements.	3522 ,279 .58 567 ,375 .28 13 ,402 .43 663 .76	8,650.21
Devils Lake Boat fund. Fire control (Weeks Law) Reforestation receipts CONSERVATION FUND Unexpended balance Receipts. Interest on fund Refunds on disbursements. Insurance receipts.	• • • • • • • • • • • • • • • • • • • •	\$585,408.08
Devils Lake Boat fund Fire control (Weeks Law) Reforestation receipts CONSERVATION FUND Unexpended balance Receipts Interest on fund Refunds on disbursements Insurance receipts Disbursements	3522 ,279 .58 567 ,375 .28 13 ,402 .43 663 .76	\$,555.21 \$585,408.08 \$512.083.68
Devils Lake Boat fund. Fire control (Weeks Law) Reforestation receipts CONSERVATION FUND Unexpended balance Receipts. Interest on fund Refunds on disbursements. Insurance receipts. Disbursements. Bountles.	3522 ,279 .58 567 ,375 .28 13 ,402 .43 663 .76	\$,555.21 \$585,408.08 \$512,083.68 60.684.00
Devils Lake Boat fund Fire control (Weeks Law) Reforestation receipts CONSERVATION FUND Unexpended balance Receipts Interest on fund Refunds on disbursements Insurance receipts Disbursements	3522 ,279 .58 567 ,375 .28 13 ,402 .43 663 .76	\$,555.21 \$585,408.08 \$512.083.68

July 1, 1927 to June 30, 1928

OPERATION

OPERATION				
Unexpended balance	\$ 10.70	36.65		
1927 excess receipts	50.0	00.00		
Disbursements—Administration	,.		\$	912.47
1927 excess receipts. Disbursements—Administration. Disbursements—Forestry.	_		•	313.29
Disbursements—Parks	_			4.758.92
Dispursements risheries	_			7,478.41
Disbursements—Wardens				7,686.23
Unexpended balance				39 ,622 .83
			_	
•	\$ 60,70	66.65	\$	60,766.65
•			_	
OPERATION—ADMINISTRATION	ON			
Appropriation	\$ 42.9	38.00		
Disbursements			3	40,444.98
Unexpended balance	-		•	2,488.07
			-	
	\$ 42,9	38.00	\$	42,988.00
•			_	 _
	_			
DETAIL OF DISBURSEMENT	8			
Salaries	\$ 21,21	4.71		
Supplies	4 .74	14.99		
Printing	6 4	8.46		
Postage	2 7	8.46 8.14		
Telephone and telegraph.	,;;	2.46		
State our expense	1 2	1.50		
State car expense Express, freight and drayage	, .	8.08		
Advertising		1.50		
Employee's expenses		7.56		
Employee a expenses				
			-	41 957 40
			•	41,857.40
				•
OPERATION—FORESTRY				
Appropriation	\$ 67.40	00.00		
Refund	1	5.00		
Refund Disbursements	•		_	
			2	46 07X 01
Unexpended halance		·	\$	46,078.01
Unexpended balance			\$ 	46,078.01 21,441.99
Unexpended balance			* 	21,441.99
Unexpended balance	\$ 67,51		\$ 	
Unexpended balance			\$	21,441.99
	\$ 67,51		\$ \$	21,441.99
DETAIL OF DISBURSEMENTS	\$ 67,51 B	5.00	\$ \$	21,441.99
DETAIL OF DISBURSEMENTS Salaries and labor	\$ 67,51 B	5.00	\$ \$	21,441.99
DETAIL OF DISBURSEMENTS Salaries and labor	\$ 67,51 8 80,72 5,77	15.00 28.44 12.87	\$ \$	21,441.99
DETAIL OF DISBURSEMENTS Salaries and labor. Employee's expense. Supplies.	\$ 67,51 \$ 67,51 8 30,72 5,77 8,33	28.44 (2.87 36.18	\$ 	21,441.99
DETAIL OF DISBURSEMENTS Salaries and labor Employee's expense. Supplies Printing.	\$ 67,51 \$ 67,51 8 30,72 5,77 8,32 99	28.44 (2.87 36.18 25.88	\$ <u>\$</u>	21,441.99
DETAIL OF DISBURSEMENT: Salaries and labor Employee's expense. Supplies. Printing Advertising.	\$ 67,51 3 \$ 30,72 5,77 8,39	28.44 22.87 26.18 25.88 78.15	\$ \$	21,441.99
DETAIL OF DISBURSEMENTS Salaries and labor Employee's expense. Supplies Printing.	\$ 67,51 3 \$ 30,72 5,77 8,39	28.44 (2.87 36.18 25.88	\$ <u>\$</u>	21,441.99
DETAIL OF DISBURSEMENT: Salaries and labor Employee's expense. Supplies. Printing Advertising.	\$ 67,51 3 \$ 30,72 5,77 8,39	28.44 22.87 26.18 25.88 78.15	\$	21,441.99 67,515.00
DETAIL OF DISBURSEMENT: Salaries and labor Employee's expense. Supplies. Printing Advertising.	\$ 67,51 3 \$ 30,72 5,77 8,39	28.44 22.87 26.18 25.88 78.15	\$ 	21,441.99
DETAIL OF DISBURSEMENTS Salaries and labor Employee's expense Supplies Printing Advertising Insurance	\$ 67,51 3 \$ 30,72 5,77 8,39	28.44 22.87 26.18 25.88 78.15	\$ 	21,441.99 67,515.00
DETAIL OF DISBURSEMENT: Salaries and labor Employee's expense. Supplies. Printing Advertising.	\$ 67,51 3 \$ 30,72 5,77 8,39	28.44 22.87 26.18 25.88 78.15	\$ \$ -	21,441.99 67,515.00
DETAIL OF DISBURSEMENTS Salaries and labor Employee's expense Supplies Printing Advertising Insurance OPERATION—PARKS	\$ 67,51 3 .\$ 30,72 . 5,77 . 8,33 . 95	28.44 72.87 16.18 25.83 78.15 14.88	\$ 	21,441.99 67,515.00
DETAIL OF DISBURSEMENTS Salaries and labor. Employee's expense Supplies. Printing. Advertising. Insurance. OPERATION—PARKS Appropriation.	\$ 67,51 3 30,72 5,77 8,33 95 5,77 6,	28.44 72.87 76.13 78.5.83 78.15 74.88	\$	21 ,441 .99 67 ,515 .00 46 ,886 .30
DETAIL OF DISBURSEMENTS Salaries and labor Employee's expense. Supplies. Printing. Advertising. Insurance. OPERATION—PARKS Appropriation. Disbursements.	\$ 67,51 3 30,72 5,77 8,33 95 5,77 6,	28.44 72.87 76.13 78.5.83 78.15 74.88	\$ \$ \$	21 ,441 .99 67 ,515 .00 46 ,886 .30 20 ,628 .59
DETAIL OF DISBURSEMENTS Salaries and labor. Employee's expense Supplies. Printing. Advertising. Insurance. OPERATION—PARKS Appropriation.	\$ 67,51 3 30,72 5,77 8,33 95 5,77 6,	28.44 72.87 76.13 78.5.83 78.15 74.88	\$	21 ,441 .99 67 ,515 .00 46 ,886 .30
DETAIL OF DISBURSEMENTS Salaries and labor Employee's expense. Supplies. Printing. Advertising. Insurance. OPERATION—PARKS Appropriation. Disbursements.	\$ 67,51 3 \$ 80,71 5,71 8,31 91 56	28.44 72.87 76.18 25.83 25.83 54.88	\$ \$ \$	21,441.99 67,515.00 46,386.30 20,628.59 3,176.41
DETAIL OF DISBURSEMENTS Salaries and labor Employee's expense. Supplies. Printing. Advertising. Insurance. OPERATION—PARKS Appropriation. Disbursements.	\$ 67,51 3 30,72 5,77 8,33 95 5,77 6,	28.44 72.87 76.18 25.83 25.83 54.88	\$ 	21 ,441 .99 67 ,515 .00 46 ,886 .30 20 ,628 .59
DETAIL OF DISBURSEMENTS Salaries and labor Employee's expense. Supplies. Printing. Advertising. Insurance. OPERATION—PARKS Appropriation. Disbursements.	\$ 67,51 3 \$ 80,71 5,71 8,31 91 56	28.44 72.87 76.18 25.83 25.83 54.88	\$ 	21,441.99 67,515.00 46,386.30 20,628.59 3,176.41
DETAIL OF DISBURSEMENTS Salaries and labor Employee's expense. Supplies. Printing. Advertising. Insurance. OPERATION—PARKS Appropriation. Disbursements.	\$ 67,51 \$ 30,77	28.44 72.87 76.18 25.83 25.83 54.88	\$ \$ \$ \$	21,441.99 67,515.00 46,386.30 20,628.59 3,176.41
DETAIL OF DISBURSEMENT: Salaries and labor Employee's expense Supplies Printing Advertising Insurance OPERATION—PARKS Appropriation Disbursements Unexpended balance DISBURSEMENTS BY PARKS	\$ 67,51 \$ 30,775	28.44 22.87 26.18 25.88 35.88 35.44.88	\$ \$ \$	21,441.99 67,515.00 46,386.30 20,628.59 3,176.41
DETAIL OF DISBURSEMENTS Salaries and labor. Employee's expense. Supplies. Printing. Advertising. Insurance. OPERATION—PARKS Appropriation. Disbursements. Unexpended balance. DISBURSEMENTS BY PARKS Parks administration.	\$ 67,51 \$ 30,72 5,77 8,33 5,67 5,67 5,67 5,77 5,77 5,77 5,83 5,80 \$ 28,80	28.44 72.87 76.18 78.15 78.15 78.15 78.15 78.15 78.15 78.15	\$	21,441.99 67,515.00 46,386.30 20,628.59 3,176.41
DETAIL OF DISBURSEMENTS Salaries and labor Employee's expense Supplies Printing Advertising Insurance OPERATION—PARKS Appropriation Disbursements Unexpended balance DISBURSEMENTS BY PARKS Parks administration Peninsula Park	\$ 67,51 \$ 30,73 \$ 30,73	28.44 22.87 26.13 25.83 25.83 25.83 25.83 25.00 26.00	\$	21,441.99 67,515.00 46,386.30 20,628.59 3,176.41
DETAIL OF DISBURSEMENTS Employee's expense Supplies. Printing. Advertising Insurance. OPERATION—PARKS Appropriation Disbursements. Unexpended balance. DISBURSEMENTS BY PARKS Parks administration Peninsula Park. Devils Lake Park	\$ 67,51 \$ 30,72	28.44 22.87 26.18 25.88 78.15 34.88 05.00	\$ 	21,441.99 67,515.00 46,386.30 20,628.59 3,176.41
DETAIL OF DISBURSEMENTS Salaries and labor. Employee's expense Supplies. Printing. Advertising. Insurance. OPERATION—PARKS Appropriation. Debursements. Unexpended balance DISBURSEMENTS BY PARKS Parks administration Peninsula Park. Devils Lake Park. Devils Lake Park. Northern Forest Park	\$ 67,51 \$ 80,77 - 8,33 - 5,6 - 5,6 - 5,6 - 5,6 - 5,6 - 5,6 - 5,6 - 5,7 - 8,33 - 5,7 - 6,7 - 7,0 - 1,0 - 1,	28.44 22.87 26.18 25.83 25.83 25.83 25.83 25.90 25.00	\$ 	21,441.99 67,515.00 46,386.30 20,628.59 3,176.41
DETAIL OF DISBURSEMENTS Employee's expense Supplies. Printing. Advertising. Insurance. OPERATION—PARKS Appropriation Disbursements. Unexpended balance. DISBURSEMENTS BY PARKS Parks administration Peninsula Park. Devils Lake Park. Northern Forest Park. Nichon Dewey Park.	\$ 67,51 \$ 30,775	28.44 22.87 26.18 25.88 8.15 44.88 95.00 95.00	\$ 	21,441.99 67,515.00 46,386.30 20,628.59 3,176.41
DETAIL OF DISBURSEMENTS Salaries and labor. Employee's expense. Supplies. Printing. Advertising Insurance. OPERATION—PARKS Appropriation Disbursements. Usexpended balance DISBURSEMENTS BY PARKS Parks administration Peninsula Park. Devils Lake Park Nelson Dewey Park. Nithers Porest Park Nithers Porest Park Nithers Park	\$ 67,51 \$ 30,73	28.44 22.87 365.83 81.15 34.88 95.00 95.00	\$ 5	21,441.99 67,515.00 46,386.30 20,628.59 3,176.41
DETAIL OF DISBURSEMENTS Salaries and labor Employee's expense Supplies Printing Advertising Insurance OPERATION—PARKS Appropriation Disbursements Unexpended balance DISBURSEMENTS BY PARKS Parks administration Peninsula Park Devils Lake Park Northern Forest Park Niction Dewcy Park Interstate	\$ 67,51 \$ 30,775	28.44 22.87 36.18 35.83 38.15 44.88 95.00 95.00 95.00	\$ 	21,441.99 67,515.00 46,886.30 20,628.59 3,176.41
DETAIL OF DISBURSEMENTS Salaries and labor. Employee's expense Supplies. Printing. Advertising Insurance. OPERATION—PARKS Appropriation Disbursements. Unexpended balance DISBURSEMENTS BY PARKS Parks administration Peninsula Park Northern Forest Park Nieson Dewey Park Interstate Park Tower Hill Park Tower Hill Park Tower Hill Park Pattion Park Tower Hill Park Pattion Park	\$ 67,51 \$ 30,72 5,77 8,33 5,6 5,6 5,77 5,6 5,77 5,77 5,77 7,00	28.44 22.87 25.83 81.5 25.83 81.15 44.88 05.00 05.00 06.34 977.91 77.91 85.96 83.12 85.96 83.12 85.96	\$ \$ \$	21,441.99 67,515.00 46,886.30 20,628.59 3,176.41
DETAIL OF DISBURSEMENTS Salaries and labor. Employee's expense Supplies. Printing. Advertising Insurance. OPERATION—PARKS Appropriation Disbursements. Unexpended balance DISBURSEMENTS BY PARKS Parks administration Peninsula Park Northern Forest Park Nieson Dewey Park Interstate Park Tower Hill Park Tower Hill Park Tower Hill Park Pattion Park Tower Hill Park Pattion Park	\$ 67,51 \$ 30,72 5,77 8,33 5,6 5,6 5,77 5,6 5,77 5,77 5,77 7,00	28.44 22.87 36.18 378.15 364.88 25.00 25.00 26.34 27.91 27.91 27.91 27.91 27.91 27.91 28.31 29.63	\$ \$	21,441.99 67,515.00 46,886.30 20,628.59 3,176.41
DETAIL OF DISBURSEMENTS Salaries and labor. Employee's expense Supplies. Printing. Advertising. Insurance. OPERATION—PARKS Appropriation Disbursements. Unexpended balance. DISBURSEMENTS BY PARKS Parks administration Peninsula Park. Northern Forest Park. Northern Forest Park. Interstate Park. Interstate Park. Interstate Park. Interstate Park. Interstate Park Belmont Park Belmont Park Belmont Park Belmont Park Belmont Park Belmont Park Belmont Park Belmont Park Belmont Park Belmont Park Belmont Park Belmont Park Belmont Park Belmont Park Belmont Park Belmont Park Belmont Park Belmont Park Belmont Park	\$ 67,51 \$ 30,775	28.44 22.87 26.18 25.88 88.15 44.88 95.00 95.00 95.00 95.00 96.34 97.91 87.91	\$ \$	21,441.99 67,515.00 46,886.30 20,628.59 3,176.41
DETAIL OF DISBURSEMENTS Salaries and labor. Employee's expense. Supplies. Printing. Advertising. Insurance. OPERATION—PARKS Appropriation. Disbursements. Unexpended balance. DISBURSEMENTS BY PARKS Parks administration Peninsula Park. Devils Lake Park. Nothers Porest Park Nelson Dewey Park. Interstate Park Tower Hill Park Pattison Park Belmont Park Cushing Memorial Park Cushing Memorial Park Cushing Memorial Park Cushing Memorial Park Cushing Memorial Park	\$ 67,51 \$ 30,73	28.44 72.87 86.18 88.15 84.88 95.00 95.00 96.34 97.91 97.91 97.91 98.31	\$ - \$ - \$	21,441.99 67,515.00 46,886.30 20,628.59 3,176.41
DETAIL OF DISBURSEMENT: Salaries and labor. Employee's expense. Supplies. Printing. Advertising. Insurance. OPERATION—PARKS Appropriation Disbursements. Unexpended balance. DISBURSEMENTS BY PARKS Parks administration Peninsula Park. Devils Lake Park Northern Forest Park Northern Forest Park Interstate Park Tower Hill Park Pattison Park Beimont Park	\$ 67,51 \$ 30,775	28.44 22.87 36.18 35.583 78.15 44.88 95.00 95.00 95.00 95.00 96.34 97.91 97.91 97.91 98.92 98.92 98.92 98.92 98.92 98.92 98.93 98 98.93 98.93 98.93 98.93 98.93 98 98 98 98 98 98 98 98 98 98 98 98 98	\$ 	21,441.99 67,515.00 46,886.30 20,628.59 3,176.41
DETAIL OF DISBURSEMENTS Salaries and labor. Employee's expense. Supplies. Printing. Advertising. Insurance. OPERATION—PARKS Appropriation. Disbursements. Unexpended balance. DISBURSEMENTS BY PARKS Parks administration Peninsula Park. Devils Lake Park. Nothers Porest Park Nelson Dewey Park. Interstate Park Tower Hill Park Pattison Park Belmont Park Cushing Memorial Park Cushing Memorial Park Cushing Memorial Park Cushing Memorial Park Cushing Memorial Park	\$ 67,51 \$ 30,775	28.44 72.87 86.18 88.15 84.88 95.00 95.00 96.34 97.91 97.91 97.91 98.31	\$ 	21,441.99 67,515.00 46,886.30 20,628.59 3,176.41
DETAIL OF DISBURSEMENT: Salaries and labor. Employee's expense. Supplies. Printing. Advertising. Insurance. OPERATION—PARKS Appropriation Disbursements. Unexpended balance. DISBURSEMENTS BY PARKS Parks administration Peninsula Park. Devils Lake Park Northern Forest Park Northern Forest Park Interstate Park Tower Hill Park Pattison Park Beimont Park	\$ 67,51 \$ 30,775	28.44 22.87 36.18 35.583 78.15 44.88 95.00 95.00 95.00 95.00 96.34 97.91 97.91 97.91 98.92 98.92 98.92 98.92 98.92 98.92 98.93 98 98.93 98.93 98.93 98.93 98.93 98 98 98 98 98 98 98 98 98 98 98 98 98	\$ \$ \$ \$	21,441.99 67,515.00 46,386.30 20,628.59 3,176.41 23,805.00
DETAIL OF DISBURSEMENT: Salaries and labor. Employee's expense. Supplies. Printing. Advertising. Insurance. OPERATION—PARKS Appropriation Disbursements. Unexpended balance. DISBURSEMENTS BY PARKS Parks administration Peninsula Park. Devils Lake Park Northern Forest Park Northern Forest Park Interstate Park Tower Hill Park Pattison Park Beimont Park	\$ 67,51 \$ 30,775	28.44 22.87 36.18 35.583 78.15 44.88 95.00 95.00 95.00 95.00 96.34 97.91 97.91 97.91 98.92 98.92 98.92 98.92 98.92 98.92 98.93 98 98.93 98.93 98.93 98.93 98.93 98 98 98 98 98 98 98 98 98 98 98 98 98	\$ \$ \$ \$	21,441.99 67,515.00 46,886.30 20,628.59 3,176.41

Salaries and laborSupplies		
	.\$ 17,682.58 5,974.98	
Supplies	. 5,974.98	
Printing	402.66 45.38	
Employee's expenses Printing Telephone	100.50	
Insurance	1,181.41	
		\$ 25,887.51
OPERATION—WARDENS		
AppropriationRefund	. \$214,140.00 . 4.78	
Disbursements	. 4.70	\$171,888.57
Unexpended balance	•	42 ,756 .21
•	\$214,144.78	\$214,144.78
DETAIL OF DISBURSEMENTS	1	·
Salaries	\$110 ARR RR	
Railroad fares	. 1.604.11	
Hotel expense	21,212.69	
Mileage	11.962.67	
Livery	11.96 8,163.72	
State car expense	5,816.68	
Car allowance		
Ges and oil	6 554 79	
Supplies	6 ,592 .98	,
Telephone	615.75	
Insurance	205.58	
Advertising Express and drayage	82.00 54.78	
Game Farm—wardens	160.51	
		\$179,074.80
operation—fisheries		
Appropriation	\$110,614.00	
Refund	89.65	4100 409 00
Disbursements		\$106,468.08
		4 ,190 .62
	\$110,658.65	4,190.62 \$110,653.65
DISBURSEMENTS BY HATCHER	\$110,653.65 (ES	4,190.62
Fisheries administration	\$110,653.65 (ES \$ 5.904.59	4,190.62
Fisheries administration Madison Hatchery	\$110,658.65 (ES \$ 5,904.59 8,315.80	4,190.62
Fisheries administration Madison Hatchery Bayfield Hatchery	\$110,658.65 (ES \$ 5,904.59 8,315.80 10,548.89	4,190.62
Fisheries administration Madison Hatchery Bayfield Hatchery Minocoua Hatchery	\$110,658.65 (ES \$ 5,904.59 8,315.80 10,548.89 8,018.86	4,190.62
Fisheries administration Madison Hatchery Bayfield Hatchery Minocqua Hatchery Delafield Hatchery Wild Rose Hatchery	\$110,653.65 (ES \$ 5,904.59 8,315.80 10,548.89 3,018.86 3,828.27 9,564.58	4,190.62
Fisheries administration Madison Hatchery Bayfield Hatchery Minocqua Hatchery Delafield Hatchery Delafield Hatchery Sturreon Bay Hatchery	\$110,658.65 (ES \$ 5,904.59 8,315.80 10,548.89 3,018.86 3,823.27 9,564.58 4,468.76	4,190.62
Fisheries administration Madison Hatchery Madison Hatchery Bayfield Hatchery Delafield Hatchery Wild Rose Hatchery Sturgeon Bay Hatchery Sturgeon Hatchery Sturgeon Hatchery	\$110,658.65 (ES \$ 5,904.59 8,315.30 10,548.89 3,018.86 3,823.27 9,564.58 4,468.76 3,590.27	4,190.62
Fisheries administration Madison Hatchery Bayfield Hatchery Minocqua Hatchery Delanield Hatchery Wild Rose Hatchery Sturgeon Bay Hatchery Sheboygan Hatchery Oscoola Hatchery	\$110,658.65 IES \$ 5,904.59 8,315.30 10,548.89 3,018.86 3,823.27 9,564.58 4,468.76 3,590.27 12,916.06	4,190.62
Fisheries administration Madison Hatchery Bayfield Hatchery Minocqua Hatchery Delanfield Hatchery Wild Rose Hatchery Wild Rose Hatchery Stupeon Bay Hatchery Stupeon Bay Hatchery Osceola Hatchery Westfield Hatchery	\$110,653.65 (ES \$ 5,904.59 8,315.80 10,548.89 3,018.86 3,823.27 9,564.58 4,468.76 3,590.27 12,916.06	4,190.62
Fisheries administration Madison Hatchery Bayfield Hatchery Minocqua Hatchery Deiafield Hatchery Wild Rose Hatchery Sturgeon Bay Hatchery Sheboygan Hatchery Oaceola Hatchery Hatchery Hatchery Hayward Hatchery Hayward Falis Hatchery St. Croix Falis Hatchery	\$110,658.65 (ES \$ 5,904.59 8,315.80 10,548.89 3,018.86 3,823.27 9,564.58 4,468.76 3,590.27 12,916.06 1,679.83 750.89 11,865.41	4,190.62
Fisheries administration Madison Hatchery Bayfield Hatchery Minocqua Hatchery Delafield Hatchery Wild Rose Hatchery Sturgeon Bay Hatchery Sturgeon Bay Hatchery Oscoola Hatchery Westfield Hatchery Hayward Hatchery Et Croix Falis Hatchery St. Croix Falis Hatchery Et Cloix Falis Hatchery Et Cloix Falis Hatchery	\$110,653.65 \$ 5,904.59 8,315.30 10,648.89 3,018.86 3,323.27 9,564.58 4,468.76 3,590.27 12,916.06 1,679.83 750.89 11,865.41	4,190.62
Fisheries administration Madison Hatchery Bayfield Hatchery Minocqua Hatchery Minocqua Hatchery Mid Rose Hatchery Sturgeon Bay Hatchery Sturgeon Bay Hatchery Sheboygan Hatchery Osceola Hatchery Westfield Hatchery Hayward Hatchery St. Croix Falis Hatchery Eau Claire Hatchery Sparta Hatchery Sparta Hatchery	\$110,658.65 \$ 5,904.59 8,315.30 10,548.89 3,018.86 3,823.27 9,564.58 4,468.76 3,590.27 12,916.06 1,679.83 1,679.83 11,865.41 1,905.58 2,027.14	4,190.62
Fisheries administration Madison Hatchery Bayfield Hatchery Minocqua Hatchery Delafield Hatchery Wild Rose Hatchery Wild Rose Hatchery Surgeon Bay Hatchery Subeboygan Hatchery Osceola Hatchery Hayward Hatchery Hayward Hatchery Eau Claire Hatchery Sparta Hatchery Sponer Hatchery Sponer Hatchery Sponer Hatchery	\$110,658.65 (ES \$ 5,904.59 8,315.80 10,548.89 3,018.86 3,823.27 9,564.58 4,468.76 3,590.27 12,916.06 1,679.83 750.89 11,865.41 1,905.58 2,027.14.06	4,190.62
Fisheries administration Madison Hatchery Bayfield Hatchery Minocqua Hatchery Minocqua Hatchery Delafield Hatchery Sturgeon Bay Hatchery Sturgeon Bay Hatchery Osceola Hatchery Westfield Hatchery Hayward Hatchery St. Croix Falis Hatchery Stau Claire Hatchery Sparta Hatchery Spooner Hatchery Spooner Hatchery Spooner Hatchery	\$110,653.65 (ES \$ 5,904.59 8,315.30 10,548.89 3,018.86 3,823.27 9,564.58 4,468.76 3,590.27 12,916.06 1,679.83 750.89 11,865.41 1,905.58 2,027.14 14.06 109.30	4,190.62
Fisheries administration Madison Hatchery Bayfield Hatchery Minocqua Hatchery Delafield Hatchery Wild Rose Hatchery Sturgeon Bay Hatchery Sturgeon Bay Hatchery Oscoola Hatchery Westfield Hatchery Hayward Hatchery Eau Claire Hatchery St. Croix Falis Hatchery Sparta Hatchery Sparta Hatchery Sparta Hatchery Eggle River Hatchery Eagle River Hatchery Dahkosh Hatchery Dalkosh Hatchery Brule Hatchery Brule Hatchery Brule Hatchery	\$110,653.65 \$ 5,904.59 8,315.30 10,648.89 8,018.86 8,323.27 9,564.58 4,468.76 3,590.27 12,916.06 1,679.83 750.89 11,865.41 1,905.58 2,027.14 14,06 10,30 79.86 985.41	4,190.62
Fisheries administration Madison Hatchery Bayfield Hatchery Minocqua Hatchery Minocqua Hatchery Minocqua Hatchery Delanield Hatchery Sturgeon Bay Hatchery Sturgeon Bay Hatchery Sheboygan Hatchery Osceola Hatchery Westfield Hatchery Hayward Hatchery St. Croix Falis Hatchery Eau Claire Hatchery Sparta Hatchery Sponer Hatchery Sponer Hatchery Cagle River Hatchery Oshkosh Hatchery Brule Hatchery Brule Hatchery Lakewood Hatchery Lakewood Hatchery	\$110,653.65 (ES \$ 5,904.59 8,315.80 10,548.89 3,018.86 3,823.27 9,564.58 4,468.76 3,590.27 12,916.06 1,679.83 11,865.41 1,905.58 2,027.14 14.06 109.30 79.86 985.41 2,191	4,190.62
Fisheries administration Madison Hatchery Bayfield Hatchery Minocqua Hatchery Delafield Hatchery Wild Rose Hatchery Sturgeon Bay Hatchery Sturgeon Bay Hatchery Osceola Hatchery Westfield Hatchery Hayward Hatchery Eau Claire Hatchery St. Croix Falis Hatchery Sparta Hatchery Sparta Hatchery Sparta Hatchery Eagle River Hatchery Eagle River Hatchery Dahkosh Hatchery Brule Hatchery Lakewood Hatchery Lakewood Hatchery Lakewood Hatchery Blashwood Hatchery	\$110,658.65 (ES \$ 5,904.59 8,315.30 10,548.89 3,018.86 3,823.27 9,564.58 4,468.76 3,590.27 12,916.06 1,679.83 750.89 11,865.41 1,905.58 2,027.14.06 109.30 79.86 985.41 21.91.91	4,190.62
Fisheries administration Madison Hatchery Bayfield Hatchery Minocqua Hatchery Delafield Hatchery Wild Rose Hatchery Sturgeon Bay Hatchery Sturgeon Bay Hatchery Oscoola Hatchery Westfield Hatchery Latchery Hayward Hatchery St. Croix Falis Hatchery Eau Claire Hatchery Sparta Hatchery Sparta Hatchery Eagle River Hatchery Eagle River Hatchery Dahkosh Hatchery Brule Hatchery Brule Hatchery Lakewood Hatchery Lakewood Hatchery Blashwood Hatchery	\$110,653.65 IES \$ 5,904.59 8,315.30 10,548.89 3,018.86 3,823.27 9,564.58 4,448.76 3,590.27 12,916.06 10,905.71 1,905.58 2,027.14 14,06 109.30 79.86 935.41 21,91 209.31 729.16	4,190.62
Fisheries administration Madison Hatchery Bayfield Hatchery Minocqua Hatchery Delafield Hatchery Wild Rose Hatchery Sturgeon Bay Hatchery Sturgeon Bay Hatchery Oscoola Hatchery Westfield Hatchery Latchery Hayward Hatchery St. Croix Falis Hatchery Eau Claire Hatchery Sparta Hatchery Sparta Hatchery Eagle River Hatchery Eagle River Hatchery Dahkosh Hatchery Brule Hatchery Brule Hatchery Lakewood Hatchery Lakewood Hatchery Blashwood Hatchery	\$110,658.65 (ES \$ 5,904.59 8,315.80 10,548.89 3,018.86 3,823.27 9,564.58 4,468.76 3,590.27 12,916.06 1,679.83 750.89 11,865.41 1,905.58 2,027.14 14,06 109.30 79.36 985.41 21,91 209.31 729.16 620,97	4,190.62
Fisheries administration Madison Hatchery Bayfield Hatchery Minocqua Hatchery Delafield Hatchery Wild Rose Hatchery Sturgeon Bay Hatchery Sturgeon Bay Hatchery Oscoola Hatchery Westfield Hatchery Hayward Hatchery Eau Claire Hatchery St. Croix Falis Hatchery Sparta Hatchery Sparta Hatchery Sparta Hatchery Eagle River Hatchery Eagle River Hatchery Dahkosh Hatchery Brule Hatchery Brule Hatchery Birchwood Hatchery Wisconsin Rapids Hatchery Wisconsin Rapids Hatchery Marinette Hatchery Canny Park Hatchery	\$110,653.65 (ES \$ 5,904.59 8,315.80 10,548.89 3,018.86 3,323.27 9,564.59 12,916.06 1,679.83 750.89 11,865.41 1,905.58 2,027.14 1,905.58 2,027.14 1,905.58 109.30 79.36 985.41 21,91 209.31 729.16 620.97 868.17	4,190.62
Fisheries administration Madison Hatchery Bayfield Hatchery Minocqua Hatchery Delafield Hatchery Wild Rose Hatchery Wild Rose Hatchery Sturgeon Bay Hatchery Sturgeon Bay Hatchery Oaccola Hatchery Westfield Hatchery Hayward Hatchery Eau Claire Hatchery St. Croix Falis Hatchery Stau Claire Hatchery Sparta Hatchery Sparta Hatchery Eagle River Hatchery Eagle River Hatchery Dahkosh Hatchery Lakewood Hatchery Brule Hatchery Brule Hatchery Wisconsin Rapids Hatchery Wisconsin Rapids Hatchery Marinette Hatchery Fenny Park Hatchery Itate Fair Exhibit Collection of fish.	\$110,653.65 \$ 5,904.59 8,315.30 10,648.39 3,018.86 3,323.27 9,564.58 4,468.76 3,590.27 12,916.06 1,679.83 7,506.89 11,865.41 1,905.58 2,027.14 114.06 109.30 79.36 109.30 79.36 109.30 11,205.41 21,91 209.31 729.16 620.97 388.17 114.01	4,190.62
Fisheries administration Madison Hatchery Bayfield Hatchery Minocqua Hatchery Deiafield Hatchery Wild Rose Hatchery Wild Rose Hatchery Sturgeon Bay Hatchery Sheboygan Hatchery Osceola Hatchery Hayward Hatchery Hayward Hatchery Eau Claire Hatchery Sparta Hatchery Sparta Hatchery Sparta Hatchery Sponer Hatchery Eagle River Hatchery Brule Hatchery Fenny Park Hatchery State Fair Exhibit	\$110,653.65 \$ 5,904.59 8,315.30 10,548.89 8,018.86 8,323.27 9,564.58 4,468.76 3,590.27 12,916.06 1,679.83 750.89 11,865.41 1,905.58 2,027.14 14,06 19,30 79,36 985.41 20,91 209,31 729.16 620.97 868.17	4,190.62

DETAIL OF DISBURSEMENTS		
Salaries	62,886.27	`
Fish food	18,267.55	
Supplies	16 S42 ST	
Employees expenses.	11,818.49 2,018.52	
Drayage	2,018.52	
Telephone	908.42	
Printing	84.69	
Insurance	1,669.19	
-		\$118,986.44
-		\$110,500.44
REPAIRS AND MAINTENANCE		
Appropriation	18.10	
Disbursements.	20.10	\$ 16.632.22
Unexpended balance	•	\$ 16,682.22 12,210.88
-		
<u>•</u>	28,843.10	\$28,843.10
CLASSIFICATION OF DISBURSEME Forestry.	NTS \$668.56	
Fisheries	14 852 88	
Parks	14,852.88 1,258.05	
Wardens	353.23	
-		
		\$16,682.22
•		
,		
DISBURSEMENTS BY HATCHERI	ES	
Madison Hatchery	\$1,968.58	
Bayfield Hatchery	3 192 09	
	697.48	
Delafield Hatchery	756.75	
Wild Rose Hatchery. Sturgeon Bay Hatchery.	2,804.89	
Sturgeon Bay Hatchery	90.39	
Sheboygan Hatchery	404.68	
Osceola Hatchery Westfield Hatchery	1,917.68	
Westheld Hatchery	41.77	
Hayward Hatchery St. Croix Falls Hatchery	284.45	
En Clair Watchery	701.50	
Eau Claire Hatchery	22.88	
Brule Hatchery	50.00	
Birchwood Hatchery	87.15	
Tenny Park Hatchery Collection of fish	58.18 619.12	
Distribution of fish	592.65	
Eagle River Hatchery	7.74	
Sparta Hatchery	110.00	
	110.00	e14 050 00
-		\$14,352.38
DISBURSEMENTS BY PARKS		
Peninsula Park	\$133.58	
Devils Lake Park	981.19	
Inversitate Park	106.10	
Pattison Park	18.50	
Brule Park	49.50	
Perrot Park	19.18	
<u>.</u>		\$1,258.05
DDODEDMY AND IMPROVEMENT	no.	
PROPERTY AND IMPROVEMENT	\$89 ,625.00	
Unexpended balance	1,723.91	
	1.88	
Sale of entomobiles	1,062.78	
Disbursements	*,00=.10	366 .588 .44
Disbursements. Unexpended balance.		\$66,538.44 25,880.08
•		
	\$92,418.52	\$ 92 ,418 . 52
•		

on \$309.18 20,952.76 11,389.68 7,991.94	
7 ,991.94 25 ,889.88	
. ,	\$92,413.
DISBURSEMENTS BY PARKS	
istration	
Park 2.618.95	
rest Park 4,381.92 y Park 76.27	
1,187.30	
ark 25.90 k 1,009.37	
k 78.14	
norial Park 808.05	
82.52	\$11,389
	411,000.
DISBURSEMENTS BY HATCHERIES	
chery 1,840.62	
chery 1,129.97 stchery 2,142.77	
chery 5,488.35	
xchery 5,488.35 atchery 586.46 r Hatchery 52.65	
atchery 90.39	
hery 1 528 20	
tchery 383.06 449.04	•
tchery 388.06 tchery 449.04 is Hatchery 1,178.83	
atchery 998.84	
ery 31.53 hery 40.80	
Hatchery 103.19	
Hatchery 103.19 ry 874.43 tchery 12.00	
atchery 312.37	
pids Hatchery 12.00	
atchery 312.37 pids Hatchery 12.00 flatchery 8.65 flish 967.45	
of fish 7,120.64	
-	\$25 ,889.
BOUNTIES	\$81,461.
***************************************	\$81,461.
EMERGENCY FIRE WARDENS	
B	\$10,506.
	\$10,506.
palance \$2,046.43 n Land Exchange Fund 25,000.00	
00F 4 780 96	
20.20-6b 20.20-6d	\$5,557.6 8,000.0 17,000.0
20.20-6d	17,000.0
alance	6 ,269.0
\$31 ,826.69	\$31,826.
DETAIL OF DISBURSEMENTS	
	\$5,557.6
	40,001.0

LANDJANDJIMPROVEMENTS WESTFIELD	HATCHERY	
Appropriation—Land	\$2,000.00 1,000.00	
Appropriation—Improvements	2,000.00	\$1,800.00 1,700.00
Oncapetion Datation	\$8,000.00	\$3,000.00
•	40,000.00	
STATE PARK RECREATION		
Appropriation	\$5,000.00 2,287.92	
Disoursements	2,201.92	\$2,782.61
Unexpended balance		4,555.81
-	\$7,287.92	\$7,287.92
DETAIL OF DISBURSEMENTS		•
Salaries		\$2,445.25 287.86
Supplies		\$2,732.61
		42,102.01
COPPER FALLS PARK		
AppropriationUnexpended balance	\$17,000.00	\$17,000.00
-	417 000 00	\$17,000.00
-	\$17,000.00	\$11,000.00
FIRE PREVENTION AND CONTR	OL.	
CLARK-McNARY LAW	•	
Unexpended balance	\$16,746.93 19,825.98	
Kenings	26.94	
Disbursements Unexpended balance		\$21,880.65 14.719.20
	\$36,599.85	\$86,599.85
-	+00,000.00	400,000.00
DETAIL OF DISBURSEMENTS		
Salaries	•	\$8,658.59
Supplies Employees expenses		11,074.45 1,758.87
Printing		398.74
		\$21,880.65
DEVILS LAKE BOAT FUND		
Unexpended balance	\$2,584.87 1,852.90	
Receipts for year	1,862.90	\$1,280.16 3,157.61
Unexpended blance		8,157.61
·	\$4 ,437 .77	\$4 ,487 .77
DEMAN OF DIGDINGS WENT		
DETAIL OF DISBURSEMENTS Salaries		\$576.00
Supplies		704.16
		\$1,280.16
LAND AND HATCHERY IN RACINE, WALWORTH OF	\$ KENOSHA (\$10,000.00	COUNTY
Disbursements. Unexpended balance.	\$10,000.00	\$21.40 9,978.60
	e10 000 00	\$10,000.00
-	\$10,000.00	φ10 ,000.00
DETAIL OF DISBURSEMENTS		
Employees expenses.		\$21.40
-		
	 -	\$21.40

ROUGH FISH—NORTHERN WATE		
Appropriation Unexpended balance Disbursements	\$15,000.00 1,083.28	\$4 ,875 .82
Unexpended balance,	\$16,083.28	11 ,207.46 \$16 ,083.28
DETAIL OF DISBURSEMENTS	1	
Salaries Supplies Employees expenses	\$3,567.50 1,201.76 106.56	
		\$4 ,875.82
NEW HATCHERY—LANGLADE COU	JNTY \$4,000.00	
Appropriation		\$4,000.00
_	\$4,000.00	\$4,000.00
NEW HATCHERY—FORT ATKINSO	N \$3,000.00	
Unexpended balance		\$3,000.00
	\$3,000.00	\$8,000.00
Appropriation	\$14,500.00 1.98	\$12,601.81 1,900.12
Unexpended balance.	\$14,501.93	\$14,501.93
DETAIL OF DISBURSEMENTS Salaries. Supplies Employees expenses	\$6,588.58 5,450.56 562.67	\$12,601.81
ROUGH FISHWINNEBAGO WATI	crs	
Appropriation Unexpended balance Rough fish receipts Disbursements Unexpended balance	\$20,000.00 6,857.77 432.09	\$9,450.12 17,839.74
-	\$27,289.86	\$27,289.86
DETAIL OF DISBURSEMENTS Salaries. Supplies Employees expenses. Drayage.	\$5,495.75 8,724.42 223.95 6.00	
		\$9,450.12
MISSISSIPPI RIVER FISH RESCUE W Unexpended balance Disbursements Repealed by Legislature — 1927	ORK \$8,615.40	\$765.87 7 ,849.58
- TOPONION BY LOGICE WHITE TO AVEI	\$8,615.04	\$8,615.40
· . •	4-1-2-1	
DETAIL OF DISBURSEMENTS Supplies Employees expenses		\$729.80 86.07
_		\$765.87
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STREAM POLLUTION		
Unexpended balance	\$2,182.87	\$2,081.85 100.52
	\$2,182.87	\$2,132.87
DETAIL OF DISBURSEMENTS		
Salaries. Printing Employees expenses.	\$416.98 1,475.18 139.69	
		\$2,081.85
HATCHERY—EAU CLAIRE	\$4,000.00	
Disbursements. Unexpended balance		\$1,395.91 2,604.09
	\$4,000.00	\$4,000.00
DETAIL OF DISBURSEMENTS		
Supplies Salaries	\$1,818.03 82.88	
•		\$1,895.91
REMODELLING HATCHERY AND ADDITIONAL	WELLS—WES	TFIELD
Appropriation—Remodelling Appropriation—Wells	\$8,500.00 500.00	
Appropriation—Remodelling Appropriation—Wells Disbursements—Remodelling Disbursements—Wells. Unexpended balance—Remodelling Unexpended balance—Wells.	-	\$5.68 286.55 8,494.82 263.45
	\$4,000.00	\$4,000.00
DETAIL OF DISBURSEMENTS Supplies	\$242.28	
	42.2.20	\$242.28
WORKSON BANGE DAM		
Appropriation	\$10,000.00	\$10,000.00
·	\$10,000.00	\$10,000.00
HORICON MARSH REFUGE Appropriation Unexpended balance	\$25,000.00	\$25,000.00
•	\$25,000.00	\$25,000.00
EMERGENCY APPROPRIATION FROM CONSE	DVATION FI	ND.
Equipping additional fire district	8	ND
Unexpended balance	\$10,446.26	\$10 ,387 .66 67 .60
•	\$10,446.26	\$10,446.26
DETAIL OF DISBURSEMENTS Supplies	\$3,914.05 6,226.62 237.99	
Employees expenses.	237.99	
•		\$10,387.66

EMERGENCY APPROPRIATION FROM CONSERVATION FUND Mississippi, Hatchery sites

Mississippi Hatchery sites		
Unexpended balance	\$20,000.00	\$20,000.00
	\$20,000.00	\$20,000.00
PARK ROADS		
Appropriation Unexpended balance	\$50,000.00	
Unexpended balance	62,158.63 309.75	
Disbursements. Unexpended balance	500.00	\$80 ,129.80 32 ,338.58
	\$112,468.88	\$112,468.88
DETAIL OF DISBURSEMENTS		
Supplies	\$10,499.37 69,680,43	
,		\$80,129.80
REFORESTATION FUND		
Unexpended balance	\$2,882.80 1,112.30	
	-,	\$1,324.97
Unexpended balance	\$3,995.10	2,832.80 \$3,995.10
	4 0 ,880.10	43,550.10
DETAIL OF DISBURSEMENTS		
Supplies Employees expenses.	\$442.51 58.96	
Salaries	828.50	
		\$1,324.97
FIRE LOSS—VILAS COUNTY HOU	SE	
Unexpended balance	\$2.28	***
Disbursements		\$2.28
	\$2.28	\$2.28
DETAIL OF DISBURSEMENTS		
Supplies	\$2.28	
		\$2.28
FIRE LOSS—NETS, MINOCQUA HATO	CHERY	
Unexpended balance Disbursements	\$811.40	\$311.40
	\$311.40	\$311.40
•		
DETAIL OF DISBURSEMENTS Supplies	\$311.40	
		\$311.40
•		
FIRE LOSS—TOMAHAWK LAKE CA		
Unexpended balance	\$1,442.77	\$1,236.43
Unexpended balance		206.34
	\$1 ,442 . 77	\$1,442.77
DETAIL OF DISBURSEMENTS		
Supplies	\$1 ,236 .48	
		\$1,442.77
n	igitized by G O	ogle
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BIENNIAL REPORT

Unexpended balance	CHAPTER 360, LAWS OF 1927	\$517.50	
Disbursements			\$517.50
	· •	\$517.50	\$517.50
	- · · · · · · · · ·		
Supplies	DETAIL OF DISBURSEMENTS	\$ 517. 50	
		-	\$517.50
	·=		
•		•	
Appropriation Disbursements		\$991.57	\$991.57
	·	\$991.57	\$991.57
	-		
	DETAIL OF DISBURSEMENTS		
Salaries	DETAIL OF DISBURSEMENTS	\$991.57	
	-		\$991.57
	-		
	RECEIPTS		
Nonresident fishing lices	nees.		\$205,937.77
Fish shipping coupons	enses		9 ,410 .20 5 ,849 .90
Resident hunting license	enses		157,446.15
Settler's hunting license	8	· · · · · · · · · · · · · · · · · · ·	128.50
Duplicate licenses	nses g licenses		. 242.00
Mississippi Pisson dehing	nses	·	8 ,805 .00 2 ,947 .50
Rough fish	g ncenses	· · · · · · · · · · · · · · · · · · ·	45.622.81
Confiscation			14 156 R2
Warden lees			. 8,246.96
Trapping licenses			19,816.75
Trap tags			. 19,467.66
Per line linear		·	. 1,881.60
Guide Hoomes		·	588.00
Numery		·	2.887.18
Figh dealer licenses			1 275 00
Camming licenses	·····		1.675.00
LALK MERSON MIG LEPTHS"			. 4,780.20
Devila Lake Bost magin	ta	·	2,287.92 1,852.90
Fire Control (Weeks I a	w)		19,852.92
Decoy bands			. 1,091.90
interest.			. 18,308.86
Refunda.	• • • • • • • • • • • • • • • • • • • •	·	390.80
Referentation receipts	•••••	· · · · · · · · · · · · · · · · · · ·	. 13,736.72 1,112.30
	· · · · · · · · · · · · · · · · · · ·		. 1,112.00
	_		\$561,191.68
	•		
17-	CONSERVATION FUND		
Unexpended balance	••••••	\$528,994.24	
Interest on found		546 ,885 .22	
Refunds on dishumomon	ia	18 ,808 .86 890 .80	
Dubursements		0 3 U.0U	\$576,152.20
DOUDTHE			81,461.00
Refunds of receipts			\$576,152.20 81,461.00 6,192.48 425,267.94
unexpended balance			425 ,267 .94
	, -		

\$1,089,078.62 \$1,089,078.62

DEPARTMENT OF FISHERIES

DISTRIBUTION, 1927

Hatchery	Variety of fish	Number
Madison	Rainbow (Misc.) Trout	22
Bayfield		1 .029 .08
Day 11050	Brown Trout	1,127,90
	Lake Trout	4 .072 .60
•	Salmon	185.00
Wild Rose	Salmon Brook Trout	65.00
	Brown Trout	663 .00
	Rainbow Trout	500,00
St. Croix Falls	Brook Trout	4 .411 .00
	Brown Trout	115,00
	Rainbow Trout	100.00
Deceola	Brook Trout	859,70
	Brown Trout.	150,000
Westfield	Brook Trout	298.000
	Brown Trout	50,000
akewood		150 .00
Hayward	Brook Trout	209.200
Wausaukee	Brook Trout.	200,000
Wisconsin Rapids	Rainbow Trout	284,000
Brule	Brook Trout	200,000
Sparta	Brook Trout	290 .000
-	Brown Trout	10,000
Rau Claire	Brook Trout.	360,000
	Brown Trout.	144,000
Hayward	Wall Eyed Pike	18,000,000
Minocqua	Wall Eyed Pike	85 ,279 ,000
•	Black Bass Fry	150,000
	Black Bass Fingerling	525
	Muskellunge Fry	184 ,500
	Muskellunge Fingerling	1,414
Delafield	Wall Eyed Pike	48 ,000 ,000
	Black Bass	98,000
Sagle River	Wall Eyed Pike	88 ,920 ,000
pooner	Wall Eyed Pike	25 ,200 ,000
Birchwood	Wall Eyed Pike	82 ,400 ,000
laugen	Wall Eyed Pike	22,950,000
Sheboygan	Lake Trout	9 ,400 ,000
_	Whitefish Fry	10 ,800 ,000
Sturgeon Bay	Lake Trout	16,000,000
	Whitefish Fry	8,000,000
Tenney Park	Wall Eyed Pike	None
Gills Landing	Pickerel Fingerling	181,200
dississippi River	Miscellaneous Fish	14 ,707 ,700
Veenah	Perch and White Bass	8 ,863 ,700
hippewa River	Pickerel	1,000
J. S. Fisheries Station	Brook Trout	178 ,020

DISTRIBUTION, 1928

Hatchery	Variety of fish	Number
Madison		
layfield	Brown Trout	700,000
Wild Ross		829 ,000
it. Croix Falls		4 ,548 ,900
Vestfield.	Brown Trout	285 ,900
layward	Brown Trout	209,200
Wisconsin Rapids	Wall Eyed Pike Fry Rainbow Trout	16 ,200 ,000 140 ,000
Brule	Brook Trout	252 ,800
lau Claire		299 ,600
Minocqua	Brown Trout. Wall Eyed Pike Fry Black Bass Fry	87 ,880 ,000
Delafield	Pickerel Muskellunge Wall Eyed Pike Fry Black Bass Fry	60 ,000 1 ,741 22 ,950 ,000 12 ,800
Eagle River	Black Bass Fingerling Blue Gills or Roach Wall Eyed Pike Fry	15,60
Spooner Birchwood	Wall Eyed Pike Fry	18,500,00 18,900,00
Sheboygan Sturgeon Bay	Lake Trout Fry	75,00
Tenney Park	Whitefish Pike	1,500,00
Gille Landing	Pickerel	52,57
Green Lake	White Bass	64,00
Green Bay	Miscellaneous. Rescued Fish (Perch)	3,69 120,00
U. S. Fisheries Station	Brook Trout	

SUMMARY OF FOREST AND MARSH FIRES FOR THE YEAR 1926 AS REPORTED BY DISTRICT FOREST RANGERS

During the year 238 fires were reported by the district forest rangers in the organized fire districts. No reports were received from town chairmen in unorganized territory.

The spring months, as the following tables will indicate, proved to be the season of greatest hazard from forest fires. A short, but rather severe, dry spell developed in the months of April and May when approximately 75 per cent of the fires occurred and the looked-for dry time in October failed to materialize entirely. The fall was exceptionally rainy, cold and of very limited fire hazard. Altogether the fire season of 1926 was of about normal proportions.

District	No. of Fires	% of Fires	Acres Burned	Damage
	38 29 25 87 81 28	16.0 12.2 10.5 15.5 84.0	35,266 9,049 5,958 10,040 16,881 7,391	\$ 108,822.00 2,278.00 4,305.00 40,970.00 None given 52,795.00
Total	238	100.%	84 ,585	\$ 209,170.00

FIRES BY CAUSES

District	Light- ning	R. R.	Clear- ing	Log- ging	Camp- ing	Smok- ers	Incend- iary	Misc,	Un- known
1	0 0 0. 0	9 2 8 1 14 6	2 11 2 8 8 5	0 0 0 0 0 2	1 0 2 2 2 15	6 1 4 2 14 5	,0 0 0 0	1 0 1 0 2	19 15 8 24 28 10
Total	0	40	36	2	20	32	0	4	104
%		16.8	15.2	0.8	8.4	13.4		1.7	43.7

FIRES BY MONTHS

District	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
1	0 0 0	15 12 1 3 7	20 17 21 83 61 17	0 0 2 0 9	1 0 1 1 2 0	0 0 0 0	0 0 0 0	2 0 0 0 2	0 0 0
Total	0	49	169	11	5	0	0	4	0
%		20.6	71.0	4.6	2.1			1.7	

	A	В	С	D	E
District	Under 1/4 acre	1/4 to 10 acres	11 to 100 acres	101 to 1,000 acres	1,000 acres and over
	4	6 7	12 18 10	10	6 2
	0	5	10 15 39	6 14	8 4
	0	13 7	39 13	24 6	5 2
Total	5	42	102	67	22
%	2.1	17.6	42.8	28.1	9.4

FIRES BY AREA CLASSES

SUMMARY OF FOREST AND MARSH FIRES FOR THE YEAR 1927 AS REPORTED BY DISTRICT FOREST RANGERS

During the year 229 fires were reported by the district forest rangers in the organized fire districts. No reports were received from town chairmen in unorganized territory, but reports were received from one additional fire district which had been organized during the year.

As usual, the months of April, May and June and August, September and October showed to be the season of greatest hazard. No prolonged dry spell occurred during the year but there were intermittent dry periods of short duration. As a general proposition the risk during this season was a little below normal and while a considerable number of fires occurred, considering the weather circumstances, the area burned over was materially less than had been reported for a number of years, as well as the damage incurred.

District	No. of Fires	% of Fires	Acres Burned	Acreage burned per fire	Reported Damage
1	46 26 28 34 58 17 20	20. 11.8 12.2 14.8 25.8 7.4 9.	2,287 1,602 428 3,075 2,897 1,276 678	49 61 15 90 49 75 34	\$ 2,790.00 68.00 395.00 2,454.95 1,201.00 2,293.00 250.00
Total	229	100%	12,198	58	\$ 9,451.95

FIRES BY CAUSES

District	Light- ning	R.R.	Log- ging	Clear- ing	Camp Fires	Smok- ers	In- cend- iary	Misc.	Un- known	Total
1	00000	3 2 2 0 12 2 4	2 0 0 11 0 0	10 4 7 2 7 5 7	1 1 6 2 8 1	8 8 4 8 13 3	2 2 0 2 8 0	0 1 0 0 2 2	25 18 9 14 18 4 5	46 26 28 34 58 17 20
Total	0	25	18	42	15	32	9	5	88	229

FIRES BY MONTHS

District	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
1 2 3	0 1 1	11 14 1	8 4 2	8 1 1	0 1 2	4 1 8	4 1 18	11 8 5	0
4 5 6 8	0 0 0	0 7 8 7	1 7 0 2	11 10 1 7	0 0 0	9 12 1 2	11 11 1 0	10 11 2	0 1 0 0
Total	2	48	24	39	8	32	41	44	1
%	9	18.8	10.5	17.0	1.3	14.0	17.9	19.2	

FIRES BY AREA CLASSES

-	A	В	С	D	E
District	Under ¼ acre	1/4 to 10 acres	11 to 100 acres	101 to 500 acres	500 acres and over
1	0 0 2 1 1 0	22 9 17 10 23 9 8	17 13 9 16 25 7	7 4 0 7 9 0	0 0 0 1 0 1
Total	5	98	98	27	2
%	2.2	42.6	42.6	11.7	.9

TREES SHIPPED FROM TROUT LAKE NURSERY IN 1927

Species	For Private Plantings	For State Plantings
White Pine	800 ,250	
Norway Pine Scotch Pine		
Norway Spruce	45,857	·
Total		_
Grand Total	1,000,200	1,611,250

TREES SHIPPED FROM TROUT LAKE NURSERY IN 1928

Species	For Private Plantings	For State Plantings
White Pine	366 ,875 538 ,825	22 ,050 609 ,650
Jack PineScotch Pine	87 ,850 58 ,800	5 ,000
Norway Spruce	189 ,914	100
Totals	1 ,131 ,764	686, 800 1,768, 564



View of Nursery at Trout Lake.

FOREST PLANTING STOCK DISTRIBUTED FROM TROUT LAKE NURSERY IN 1928

County	Norway Pine	White Pine	Scotch Pine	Jack Pine	Norway Spruce	Total	
dams	4,000	1,000	4 ,800	1,500	1 ,300	12,60	
ahland	200	100	1,000	100	2,000	2,40	
shland ayfield urnett arron	5,900	8,100	1,000	4,600	2,000	21,66	
urnett	500	200	200	100		1.00	
arron	1,000					1,00	
rown					500	50	
uffalo	8 ,600	6,500			800	10 ,40	
hippewaalumet	8,800	2,000	600			6,40	
alumet	800	500			2,000	8 ,30	
lark		1,700			1,100	2,80	
olumbiaunn	4,700				500	5 ,20 6 ,80	
unn	2,450 19,850	2,950	900			30,85	
ouglas ane	7,800	1,000	10,500	1,900	1,264	91 91	
oor	26,450	8,150 21,250	2,100	1,500	1,204	47 70	
odge	4,900	4,300	600		400	21 ,21 47 ,70 10 ,20	
au-Claire	2,700	3,000	1,500	500	600	8.30	
orest	26 ,850	58,850			50	85 .25	
ond du Lac	R 900	9 .200				16.10	
ond du Lac reen Lake	8,200	1,400			200	4.,80	
reen		1,100			200	1 ,30	
rant	2,950	3,450	100	400		6,90	
ron ackson efferson	8,000		1 ,000			4 ,00	
nckson	500	200			8 ,000	3,70	
efferson	4,100	2,100	100	100	2,200	8 ,60	
uneau	500	5,000	200	200		5,50	
enosha ewaunee	900	4,200	400	200		5 ,50 2 ,80	
.ewaunee		2,400			EE 000	159,50	
incoln	52 ,900 200	40 ,600 1 ,200	1 ,000	10 ,000	55,000	1:,40	
andede	4 ,200	9,400				6,60	
anglade	56,000	2,400 28,000		2,000	4,000	85,00	
Ionroe	56,000 3,700	18 050		2,000	2,500	22 .25	
fanitowoc	600	1,600	600	300	1 .000	4 ,10	
filwaukee	26 .525	9 .275	4,900 1,600 250	3 ,100	2,438	46 23	
farathon	16,300	9,275 1,100	1,600		200	19 20	
farquette	9,950	5,500	250			15.70	
zaukee	16,300 9,950 18,600	5,500 12,750 1,700	550	1,500	4,000	37.40	
utagamie	2,400	1,700			20	4,12	
conto				1,000		1,00	
neidaierce	27 ,250	8 ,850	1,650	100	3,144	40,99 22,60	
lerce	22,600					1,50	
olkortage	1,000 17,900 27,800	500 3,500	500	500		22,40	
rice	27 900	3,500	300	l.	25	27 ,32	
acine	2 700	1,100	200	1,100	2.200	7.30	
ock	2,700 2,200	3 000	200		1,085	6.38	
usk	7.400	3,000 1,600				9.00	
auk	6,950	4,350	1,300		350	12 .95	
t. Croix	8.950	550	600	500	1,750	12.35	
heboygan	6,100	2,800	1 ,600	1,400	4,000	15,40	
awyer	8,000	8,600	1,000			17,60	
hawano rempealeau ilas	2,400	8,400			4,000	9 ,80	
rempealeau	1,800	1,500			1,000	4 ,80	
ilas	582 ,600	11,000	8 ,550	45,500	776	648 ,42 50	
ernon	250	150	100			5,40	
Vashburn	1,800	3,800	300	9 100	600	82,60	
Vaupaca	15,300 14,400	11,000	2,600 4,700	3 ,100 1 ,100	6 800	49.60	
Vaukesha Vashington	6,300	17,150 10,100	150	1,100	20 150	26 20	
Valworth	500	500	100		6,800 20,150 1,000	2.00	
Vinnebago	5,700	9.300	1,700	500	8.000	20,20	
Vaushara	8,650	10,000	2.300	1,650	1,500	2,000 20,200 19,100	
Vood	6,600	3,850	3,500		2,512	16,46	
	2,530	0,000	1 .,,,,,,,		-,		
otal output of	l			1	1 1	1 700 50	
Nursery	I	ı	1	1	1	1,768,56	

REPORT, FOREST PROTECTION AFFAIRS FOR 1928

General

The fire season of 1928 was one of normal to light risk. A rather backward April was followed by a sharp, dry spell in May. During this dry spell almost 70 per cent of the fires occurred. The summer was cool with well distributed rains; the fall months were unusually wet. Little or no risk occurred in October when trouble is generally expected. Altogether 430 fires were reported, burning over 44,139 acres, and causing a damage of \$27,627.00. The appended tables will give full information on the fires occurring and other details relating to expenditures and comparisons. It will be noted that almost half the area burnt over occurred in District No. 9. This is a new district started in the spring of 1928 and a considerable part of this area burned over was marsh land. One fire occurring in December burned over almost 5,000 acres of marsh. The total area burned over (44,139 acres, above mentioned) includes both forest and marsh land. field force consisted of 11 rangers, 24 seasonal men, 371 emergency fire wardens and look-out men as needed.

Progress During 1928

The limits of the area protected from running fire was enlarged materially during 1928. The area included within all forest protection districts at the end of 1927 was 8.6 million acres; at the end of 1928, 12.5 million acres. The organization of three new districts in the spring of 1928 thus brought under protection an additional 3.9 million acres. In addition, work was commenced in another district embracing one million acres, which will come under full protection during 1929. The equipment in the various districts was increased as follows: 5 ranger offices and garage buildings erected, 22 look-outs constructed, 227 miles of telephone line built. The number of Evinrude pumps, hose for same and Indian fire pumps doubled, and the supply of hand tools, such as shovels, axes, pails, etc., was materially increased. The road-side fire prevention signs were renewed or new set-ups made in all districts.

Public Relations

In every district the local town and county officers are cooperating with the rangers toward better fire prevention and control. The feeling is wide-spread among the local citizens that these running fires must be stopped. With the state taking hold of the job and developing a definite and organized program, stability and method replace uncertainty and disarray. The gradual working out of the burning permit law brings a needed regulation in the use of out-door fires in all districts. The commission and the district ranger have had the aid of county school superintendents, county agents and other public officers in the fire prevention campaign.

In addition the word of better prevention has been carried into every nook and corner of the upper counties by lumbermen, land-

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owners, summer resort keepers, by the press and many other agencies, and the effect of this drive of the past five years has resulted in a new conception of the forest fire problem by the local people. Common observation indicates that people in general are much more careful today than they have ever been before; that large fires are decreasing, and that we are on the way to solve the fire problem and bring it under control.

Work for 1929

Total....

430

The following summary indicates the line of progress for 1929:

- 1. Get all forest protection districts fully organized and the fire detection systems completed.
- 2. Increase the boundaries of districts so as to include all land requiring protection.
- 3. Increase equipment in each district, especially by the addition of a suitable number of light fire-fighting squad cars. Keep all equipment in good shape and have same ready for all emergencies.
- 4. Organize and train local fire fighting squads, particularly in the use of fire fighting equipment.
- 5. Study improved methods of fire fighting; of areas of special risk, and the improvement of fire fighting equipment and assembly.
- 6. Improve the district bookkeeping systems, the district maps, and all check-ups on fires and expenses incurred in fire suppression.
- 7. Improve the enforcement of the burning law, the inspection of locomotive spark arresting devices and other forest protection laws.
- 8. Improve public relations, prepare exhibits for local fairs, keep road-side fire prevention signs in good shape and improve same. Maintain suitable contacts with county boards, county officials, schools, the county agent, highway and railroad workers and land owners in general.
- 9. Maintain close inspection and frequent contacts with the field force of seasonal and emergency wardens.

SUMMARY OF FOREST AND MARSH FIRES For the year 1928 AS REPORTED BY DISTRICT FOREST RANGERS

Acreage District No. of Fires % of Fires Acres Burned burned Reported per fire Damage \$2,961.60 13.6 4,601 44 50 3,495 6,186 11.5 69 35 76 26 23 53 175 ,162 767 17.6 28 33 6 .037 45 5 1Ž 2.8 591 1,060.00

100%

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108

44,139

\$27.627.45

FIRE BY CAUSES

Dist.	Fisher- men	R. R.	Log- ging	Clear- ing	Camp Fires	Smok- ers	Incend- iary	Misc.	Un- known	Total
1 2 3 4 5 6 7 8 9	0 0 0 0 16 0 0	18 7 11 3 12 8 0 4 8	1 8 1 2 2 0 2 0 3	6 11 11 14 2 4 6 14 9	8 2 8 2 5 4 0 4 10	6 10 8 0 13 3 0 20 4 2	1 2 0 4 7 8 4 4	8 2 1 0 3 0 0 1 2	21 7 10 14 19 5 7 6 12	59 44 50 85 76 26 23 53 52
Total	16	66	14	78	88	66	30	12	110	430

FIRE BY MONTHS

District	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
1	0 1 0 0 0 0	11 6 1 0 6 1 3 3	42 29 38 24 44 20 15 42 32	5 6 5 9 16 4 8 6	1 0 1 0 2 0 0 0	0 0 1 2 4 0 0	0 0 0 0 8 0 1	0 1 3 0 0 1 1	0 1 1 0 1 0 1 0 8
Total	1	36	289	65	6	9	7	7	10
%		8	67	15	4	2	1	1	2

FIRES BY AREA CLASSES

District	A	В	С	D	E	
District	Under 1/4 acre	1/4 to 10 acres	11 to 100 acres	101 to 500 acres	500 acres and over	
1 2 3 4 5 5 6 7 7 8 8 9 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4 9 14 0 7 0 1	28 14 13 5 85 12 9 19	20 14 16 22 30 13 10 29 24	5 7 6 5 4 1 4 9	2 0 1 3 0 0 0	
Total	35	154	181	47	13	
%	8	36	42	11	3	



Shanty Bay Shoreline, Peninsula Park.

BIENNIAL REPORT

OF THE

STATE CONSERVATION COMMISSION

OF

WISCONSIN

FOR THE

Fiscal Years Ending June 30, 1929 and June 30, 1930



MADISON, WISCONSIN 1930

THE STATE CONSERVATION COMMISSION

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Ladysmith HASKELL NOYES, Milwaukee Louis M. Hobbins, Madison

PAUL D. KELLETER. Conservation Director

MATT PATTERSON. Deputy Director

DIVISION HEADS

C. L. HARRINGTON. Supt. of Forests and Parks B. O. WEBSTER, Supt. of Fisheries H. W. MAC KENZIE. Supt. of Law Enforcement

William F. Grimmer, Supt. of Game F. G. WILSON, Chief Forest Fire Warden D. H. KIPP, Supt. Education and Publications

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12-29-1931

LETTER OF TRANSMITTAL

HONORABLE PHILIP F. LA FOLLETTE, Governor of Wisconsin

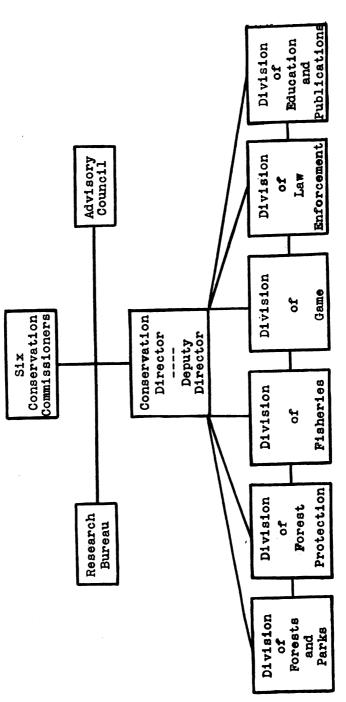
Sir: Agreeable to the provisions of law, we herewith submit a biennial report of the activities of the State Conservation Commission of Wisconsin, and trust that it will meet with your approval.

Respectfully submitted by

The State Conservation Commission,
WILLIAM MAUTHE, Chairman,
E. M. DAHLBERG, Secretary.

In Memoriam

Alfred P. Vander Kelen Robember 1928 Conserbation Marben Bans Bendrickson April 1929 . Conserbation Barben Einar P. Johnson May 1929 Conserbation Warden Ellis M. Weaber September 1929 Conserbation Marden Joseph Beit3 October 1929 District Forest Ranger Henry C. Gruebner February 1930 Conserbation Marden **M**illiam 狗. Riebe June 1930 Conservation Marden



Organization Chart of the Wisconsin Conservation Commission

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FOREWORD

For the second time it is the privilege of this commission to submit a biennial report of the activities within the state having as their purpose the conservation of the natural resources.

The responsibility for leadership in conservation in Wisconsin has, by legislative enactment, been placed in the hands of the commission. This responsibility is accepted and the operations of the commission have been at all times such as to meet the various administrative problems in a broad, sympathetic, and constructive manner. At the same time there has been constant opportunity for the closest cooperation with the various state departments, organizations, and individuals having an active interest in conservation. Probably never in the history of conservation in Wisconsin has there been better team work. There is general recognition that the restoration of the natural resources is an undertaking that must be shared in by all citizens. social and economic life of the state is most intimately allied with the proper use of the natural resources. for well balanced and effective work in conservation rests primarily on an efficient program of land utilization. formulation of such a program rests on the accuracy of the information at hand, and so during the biennium the commission has taken action in these important matters only after thorough study and weighing of the evidence so obtained.

The necessary field work for the most part has been done by employees of the department, but in reaching final decision the commission has been fortunate in getting much constructive advice from conservation-minded organizations and individuals who have ever held themselves in readiness to give their counsel and special knowledge for the advancement of conservation in the state.

On the basis of the experience gained, a number of

changes in the fundamental organization were perfected during the past two years. The increase in the volume of work necessitated a further division of the administrative work in the department. This work is now handled by six divisions: forests and parks, forest protection, fisheries, law enforcement, game, and education and publications.

In addition, services of high order have been rendered by the research bureau and the members of the advisory council. Detailed accounts of the respective activities, plans, and recommendations will be set forth later in this report. At this time attention is called to several matters of general interest which are indicative of the policy followed by the commission.

Forestry

The constitutional provision authorizing the allotment of tax money for forestry purposes adopted in 1924, was made effective for the first time on March 1, 1930. By legislative action 1/20 of a mill of the tax money was designated for forestry purposes, and under this authorization \$298,797.62 was made available to the commission for the acquisition, development, and protection of forest areas in the state. As a result, there has been a strengthening of the fire protection and suppression organization in the 11 fire protection districts. Steps have also been taken to increase the capacity of the forest tree nursery at Trout lake, and there has been further consideration of the establishment of a second forest tree nursery in the central part of the state to meet the possible increased demand for forest tree planting material in this section of the state.

Plans are under way for extensive planting operations on state lands under the control of the commission, and cooperatively with the various counties which have definitely committed themselves to a forestry program by the establishment of county forests and registration thereof under the provisions of the forest crop law. There will also be forest tree planting material available for other political units of the state. Every effort is being made to increase the interest of private owners to the end that they will take active steps to reforest by planting where natural reforestation is not occurring at the present time.

The restoration of the forests in the state is of the most vital importance and can by no means be left to the individual owner. Therefore, the commission, after a state-wide survey of potential and strategically located forest areas, has designated six purchase areas within which a program of acquisition of forest lands for state purposes is under way. No purchases were consummated during the biennium, but definite places and policies were formulated for the conduct of this acquisition program.

This program will run concurrently with the purchase program of the federal government of one million acres as authorized by the legislature and the setting aside of tax delinquent lands suitable for forestry purposes by the respective counties. Conditions in the state are such that there is ample room for the development of each type of ownership and control, and not until there is a united and state-wide effort of forest restoration can a foundation be laid for satisfactory forest restoration in Wisconsin.

Registrations under the forest crop law have brought the total on December 1, 1930 to 300,000 acres, and there is every indication that an additional 100,000 acres will be offered for registration before the close of the calendar year 1930. During the closing months of this biennium a start was made in making field examinations of the lands registered to determine the production capacity of the lands. Mere registration of the land for the term authorized by the law without determined effort on the part of the owner to stimulate the productive capacity, fails to meet the intent of the law. Provision is made for periodic examination, and as such inspections are made it is planned to work out practical plans of management.

The commission has indicated to the various counties that the services of its foresters are available to them in the development and improvement of county lands registered under this law.

The bulk of the land registered by private owners under the forest crop law has been cut over and considerable time will elapse before a timber crop will be harvested. The law by no means restricts registration to such lands and several entries have been made of selectively logged areas.

The foresters of the commission have been in close touch

with several timber land operators with the result that there is strong probability that considerable areas of timber land will be entered this year which will be selectively logged later. Such handling of timber lands will be the most effective way to restore the forests in northern Wisconsin.

Parks

During the biennium three additional state parks were established—Terry Andrae in Sheboygan county, American Legion Memorial State Park and Forest Preserve in Oneida county, and Copper Falls in Ashland county; containing 112, 36,000, and 520 acres respectively. This brings the total number of state parks to 16 with a total area of 197,-957 acres.

The increased use of the state parks has called for a very extensive program for improved sanitary and safety improvements. Particular attention is being given to the purity of the water used for drinking purposes, and during 1930 repeated tests of the water supplies were made for the commission by the State Board of Health.

Forest Protection

The conservation of the natural resources of the state is possible only if the forests are kept in good growing condition and protected against destruction. Fires are a constant menace and therefore it is essential that there be an adequate system of protection against fires. In line with this, early in 1930 a chief forest fire warden was employed to organize and direct the preventive and suppression activities of the state.

The state has committed itself to a definite program of fire prevention and suppression. The organization of the 11 districts is the first step. Much work remains to be done. The strength of the organization rests on the proficiency of the men in the districts, and therefore the program ahead for the commission is the careful selection of such men, training them to the job, and the purchase of special equipment in quantity sufficient to meet the demands that arise in the total protection area of 14,000,000 acres.

Supplementary to the work done directly within and by the organization of the conservation commission is the cooperation obtainable from local county boards and private owners. Unfortunately there is not even at this time a full appreciation on the part of many citizens of the hazard existing periodically in the forest, nor the serious damage done to the vegetation and the land by fire. There are many grim evidences of continued abuse and misuse of the forest areas of this state. Fire takes a heavy toll of the inherent wealth in these areas. This lack of understanding may be overcome through education, and there has been close co-operation with the press, schools, and organizations to indicate the destructive character of uncontrolled fires in the forest.



White Lake Ranger Station. Headquarters of Forest Protection District No. 9.

Fisheries

The restocking of lakes and streams in Wisconsin has been under way for many years. During the past two years decided progress has been made in this work. There has been a general change in technique required by the distribution of larger fish. To meet this change many improvements have been made in the hatcheries. The first step has been the construction of rearing ponds where the fish may be kept twenty months before they are distributed for restocking purposes.

The larger the fish used in these operations the better chance will there be for them to overcome the difficulties

found in the lakes and streams, and grow to the size making them available for a legal catch.

There has been continued co-operation with organizations and individuals interested in the protection and development of the fish life. Many organizations have undertaken the establishment of rearing ponds, and during the year representatives of the fisheries department have assisted in the selection of proper natural lakes and given technical advice for their operation. Such private endeavors make very valuable contributions to the state, and the commission feels that they are entitled to every assistance it can render through its employees skilled in this work.

Of striking importance during this biennium has been the extensive co-operative work with the federal bureau of fisheries in Lake Michigan, in the study of conditions affecting the commercial fishing industry and the fish rescue work in the Mississippi river from which large quantities of game fish suitable to Wisconsin waters have been obtained and distributed.

The further work done in the survey of the lakes and streams to determine the suitability of these waters for game fish has been of increasing value in bringing about the proper distribution of fish with a minimum of loss.

As Wisconsin's fish and game propagation programs become more efficient, and larger numbers of fish and game are produced each year, the Wisconsin sportsman is faced with the problem of having fewer places to fish or hunt. "No Trespassing", "No Fishing", and "No Hunting" signs are becoming more common all the time. If expanded propagation programs are to mean most to Wisconsin citizens, then the state must embark on an acquisition program to secure lands for public hunting and fishing grounds.

The need for public hunting and fishing grounds is becoming more imperative annually just as the difficulties of securing such grounds are increasing each year.

Additional funds are required before the state can develop a system of public hunting and fishing grounds. Because land values are increasing in desirable places, the state should begin an acquisition program immediately if the citizens of Wisconsin are to be assured places to which they can go to hunt and fish.

Game

The division of game was created just prior to the opening of the biennium, and during the two year period great advances have been made. A game farm located in Peninsula State Park has been developed which produced during the second year, approximately 10,000 live birds and 40,000 pheasant eggs, as well as carrying on extensive research work in propagation and distribution of other species of game birds, both native and introduced. In connection with the game farm there is a native game bird and animal zoo.

The game division has conducted, partially in co-operation with the research bureau, several surveys concerned with the wild life refuge systems, state game populations, and waterfowl refuges. Both native birds and animals have been trapped and transported to suitable areas for release, or taken to the game farm for propagation experiments.

Of vital importance in the game program has been the establishment of a system of winter feeding stations in important game bird congregation centers. Co-operative winter feeding programs as well as co-operative game bird hatching and stocking programs, have been encouraged with private individuals, sportsmen's organizations, and public institutions throughout the state. Educational bulletins and instructions for these projects have been prepared and distributed.

Law Enforcement

Very effective work has been done by the wardens in the enforcement of the laws dealing with the protection of fish and game.

Their assignment is the most difficult that comes under the direction of the commission. The individual warden operates under many difficulties, and he is constantly called upon to exercise his ingenuity and skill to accomplish the task assigned him.

The size of the territory assigned to the individual warden is so large that it is humanly impossible to cover it in the manner desired by the commission or the warden himself. Then, unfortunately, in many localities of the state local opinion has not yet crystallized itself sufficiently to give a reasonable support to the warden in the disposition of cases

of law violation. There are varying degrees of support in the different parts of the state. In some localities the serious situation exists that a conviction for the violation of the game laws is almost impossible to obtain no matter how conclusive the evidence nor how flagrant the violation. This non-support at times even finds open expression of opposition to the enforcement of the fish and game laws.

It is the responsibility of every citizen to see that there be no illegal destruction of fish and game, or any of the other natural resources of the state. The warden has the special responsibility to apprehend the violator that there may be consideration of the destructive act by legally constituted courts. The loss of a case may be a matter of deep chagrin to the warden, but that is negligible as against the loss to the community when there is dynamiting of streams with the killing of hundreds of pounds of fish, or the indiscriminate shooting of the protected partridge, or killing deer out of season.

The absence of fish and game in any locality of the state is a serious loss to the local citizen when measured in terms of personal enjoyment. But that is not all. The illegal destruction of fish and game means a depletion of the available supply to such a point that there may be virtual extinction. Such a disappearance will be reflected at once in economic loss to the community, particularly through the absence of tourists and those seeking recreation. The destruction of the resource is most serious to the local community. It is hoped that there will be a fuller appreciation of what the failure to support the wardens in their efforts to enforce the law means first to the local community and next to the state as a whole.

Supplementing the careful selection of wardens through rigid examinations in co-operation with the bureau of personnel, special training schools for the wardens have been held periodically during the past two years. The consideration of problems and interchange of ideas and experience is helpful in the building up of the law enforcement work.

The total number of arrests and seizures exceeds that of any previous years.

Education and Publications

The success of any program of conservation in Wisconsin is dependent on the understanding by the citizens of the problems confronting the state and the existing machinery provided to cope with the situation. To this end the commission organized the division of education and publications.

The basic policy is to furnish strictly informational matter of service to the newspapers and other publishing agencies. In line with this, a system of daily, weekly, and monthly news releases is in operation. At times on call, special material for feature stories is furnished.

During the biennium definite advance has been made in the establishment of a photographic file of both still and motion pictures. State-wide distribution of motion picture films is obtained through a co-operative arrangement with the extension division of the university.

Within the past year several special display boards have been prepared for use at fairs, outdoor shows, and similar occasions. Visual education is most effective in connection with the work of the commission.

Plans have been formulated looking to the establishment of museums at several of the state parks to give the visitors an opportunity to view the flora and fauna of the state. Lack of funds has as yet prevented the execution of the museum plan, but a start has been made.

There has been an increasing interest manifested by educators of the state in the need for state-wide education in the schools on the various phases of conservation. To assist in this, an educational program has been prepared and distributed. Various material in the form of pamphlets and booklets has also been made available. The State Department of Public Instruction has indicated its keen interest in this, and plans to give instruction in conservation a definite place in the schools are under consideration.

Research

The commission is committed to the policy that its operations be based on reliable information. This is particularly essential with the highly technical phases of its work. The commission is operating not alone for the present, but has at all times in mind that the future progress in the conservation of the natural resources of the state is dependent on the

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skill and wisdom exercised at this time in meeting the problems.

Accordingly, there was organized the research bureau made up of outstanding scientists skilled in the fields of special interest to the work of the conservation commission.

This group of volunteers has been an important factor in determining the special studies to be undertaken. With its advice and under its guidance, special studies have been made in forestry, fish, and game. Of outstanding importance is the investigation of the prairie chicken in Wisconsin. A progress report covering the field investigation in 1929 and 1930 is available in printed form.

The serious drouth of 1930 has made the special feeding program of game birds and animals of timely interest and value.

Many of the special studies constituting the program of the research bureau require time for study and development, and report thereon will not be possible for some time to come.

Acknowledgments

The biennium 1928-1930 has been one of sincere co-operation between the conservation commission and other agencies interested in the conservation program. Other Wisconsin state officials and departments; the University of Wisconsin, in particular the College of Agriculture; and the various departments of the federal government, have all been extremely helpful.

The railroads of the state have co-operated in transporting the entire output of the state fish hatcheries without charge, and also in carrying display material to the Chicago and Milwaukee outdoor shows, and to fairs within the state.

Never before in the history of the conservation movement have private individuals and sportsmen's groups been as helpful as during the biennium. They have assisted in the propagation, distribution, and stocking of fish and game; in recommendations and suggestions for wild life refuges; and in solving other problems of vital importance to the wild life conservation program.

The Milwaukee Public Museum has been of material assistance in inaugurating the state park museum policy and

in helping the conservation commission build up its library of motion picture films.

Outstanding Conservation Accomplishments

State forests. The legislature of 1929 through the 1/20 mill forestry tax, made possible a beginning in a new forestry policy for Wisconsin. By constitutional amendment in 1924, the people of the state directed the commission to "acquire, preserve, and protect" the forest areas of the state. No money was available to make a beginning until the new forestry tax was passed.



Horicon Dam. Built across the Rock river in the city of Horicon.

Following a state-wide survey to determine the areas in the state best adapted to forestry purposes, the commission established six proposed state forest purchase areas totaling 1,047,000 acres, of which the state is the owner of 154,400 acres.

At the close of the biennium plans were formulated for the beginning of land acquisition and forest development in these areas.

Forest crop law. Wisconsin's forest crop tax law passed by the legislature of 1927, and modified by the legislature of 1929, makes possible co-operative forestry endeavors looking toward the development of both privately and publicly owned forest lands. It creates a partnership between the

state and the owner of land whether it be private individual, company, or county, for the production of forests.

The intent of the forest crop law is very inclusive. Registrations can be made under it not only for lands which have been cut over, but also for lands on which there is still a stand of timber which is to be selectively logged. This law should operate to promote both private and public forestry, to reduce tax delinquency, and to insure permanence of vital wood-using industries.

Wisconsin land owners have welcomed the forest crop tax law. In three years of operation approximately 300,000 acres have been entered under its provisions, a considerably greater amount than has been entered under the provisions of similar laws in any other state, although many states have similar laws which have been in effect for longer periods.

County forests. The legislature of 1927 authorized counties to establish county forests to put back to work the thousands of acres counties were acquiring through tax delinquency. The procedure was simplified by the legislature of 1929, and the forest crop law was amended by the same legislature, enabling counties to enter forest lands under the law without expense to them.

Marinette, Langlade, Rusk, and Washburn have established county forests, but of these, Marinette county must be credited with the greatest progress. Recently Marinette county has established and named four county forests in which the county holdings total 80,360 acres, or 54 per cent of the total land area within the boundaries of the forests. All of this will be placed under the forest crop law next year.

Horicon Marsh. The conservation commission was directed by the legislature of 1927 to restore Horicon Marsh and establish a wild life refuge thereon. The refuge was established during the first year of the biennium, and at the close of the biennium definite plans were being carried out looking toward the restoration of the marsh by the building of a dam or dams in the Rock river. The first dam has been completed and the restoration of the marsh is under way.

RECOMMENDATIONS

FORESTRY

- 1. Continue land acquisition program within the proposed state forest areas.
- 2. Encourage industrial forestry through administration of the forest crop tax law.
- Extend state tree planting program on public lands, and co-operative planting on private lands.
- 4. Continue forestry educational work in co-operation with organized agencies.
- 5. Develop state forest lands with consideration for recreational uses.
- 6. Continue co-operative work with federal government, University of Wisconsin, and other state departments.

FOREST PROTECTION

- 1. Revise forest protection district boundaries for more efficient administration.
- 2. Make new comprehensive maps of state forest protection districts.
- 3. Provide for stability in forest protection personnel by building up desirable conditions of employment.
- 4. Employ a dispatcher in each district office to assist in the assignment of emergency fire fighters.
 - 5. Establish essential substations in each district.
- 6. Improve fire prevention and suppression facilities through purchase of additional equipment for each district.
- 7. Build penetration roads into unbroken forest areas, and open old logging roads.
- 8. Co-operate with logging companies to develop private forest protection plans, and prevent creation of fire hazards.
- 9. Prepare a forest fire manual to include laws, regulations, instructions, and suggestions for district rangers and fire wardens.

STATE PARKS

- 1. Extend park system in accordance with the statewide survey made by the commission.
- 2. Equip all state parks with modern sanitary facilities, camp grounds, roads, and trails.
- 3. Acquire roadside timber strips where possible to serve as roadside parks.
- 4. Develop and encourage the use of educational facilities in state parks.

FISHERIES

- 1. Operate existing hatcheries to full capacity before building new hatcheries.
- 2. Continue expansion of fish rearing activities both state and co-operative.
- 3. Continue and expand rearing experiments for lake and pan fish.
- 4. Acquire extensive water properties suitable for rearing fish.
- 5. Develop program for state supervision of fish planting.
- 6. Continue co-operative scientific surveys relating to the commercial fishing industry.

GAME

- 1. Expand the game production program at the state game farm.
- 2. Stock sections of the state with suitable species of game birds and animals.
- 3. Develop a system of public hunting and fishing grounds.
- 4. Develop a system of refuges based on a scientific survey of conditions.
- 5. Help develop an international system of waterfowl refuges.
- 6. Make an annual survey of the game crop of the state by counties.

- 7. Maintain a comprehensive winter feeding program for game birds.
- 8. Continue research in food, cover, and predator problems in relation to game.
- 9. Continue educational work among sportsmen and citizens.

LAW ENFORCEMENT

- 1. Codify and simplify the fish and game laws.
- 2. Increase number of conservation wardens to provide better protection for the game areas of the state.
 - 3. Furnish modern equipment to all wardens.
- 4. Acquire additional large patrol boats for outlying waters.

EDUCATION AND PUBLICATIONS

- 1. Complete the conservation educational program for use in Wisconsin primary and secondary schools.
- 2. Extend the visual education program to include complete libraries of motion picture reels and lantern slides depicting conservation work and life history studies of Wisconsin game birds and animals.
- 3. Extend the public display program of the department to have Wisconsin represented at as many fairs and outdoor shows as practicable.
 - 4. Develop museums in state parks.

RESEARCH BUREAU

- 1. Continue the prairie chicken investigation.
- Inaugurate investigations of the food, habits, and range of the ring-neck pheasant, Hungarian partridge, and native Wisconsin species.
- 3. Continue the investigation of the slash disposal problem.
- 4. Continue co-operation investigations of fish food conditions in Wisconsin waters.

DIVISION OF ADMINISTRATION

Introductory

The first conservation commission in Wisconsin which concerned itself with more than one phase of the conservation program was organized by legislative action in 1915. This organization combined and correlated the activities of the then existing state board of forestry, state park board, fisheries commission, and the state fish and game warden department. This first commission was composed of three commissioners and a secretary.

The first conservation commission existed until 1923 at which time through legislation, it was replaced by a single commissioner form. Under the commissioner several division superintendents carried on the administrative work in the several divisions. This form of administration continued until August 1927.

The work of the conservation program in Wisconsin developed greatly in the few years prior to August 1927. It was thought that a broader viewpoint and wiser judgment should be secured so the legislature of that year again changed the form of administration for conservation work. The present conservation commission is composed of six commissioners who serve without remuneration. The commissioners, three of whom must reside in the southern and three in the northern half of the state, are appointed by the governor with the advice and consent of the senate. The commissioners are appointed for six year terms, two being appointed every odd year. It is this commission which today directs the policies of the conservation movement in Wisconsin. Such a form of administration insures a broad attitude toward all conservation problems.

Under chapter 23.09 W. S. the organization of the conservation commission is authorized and its powers delineated. This statute empowers the commission to make such rules, studies, surveys, services, or powers as it may deem necessary and advisable in the carrying out of the many phases of the conservation program. It has the authority to close seasons on any species of fish or game in case of urgent emergency; to designate such localities as it finds necessary as game refuges or fish refuges; it may acquire lands or waters by purchase, condemnation, lease, agreement, or gift for forestry purposes, state parks, public hunting or fishing, fish hatcheries and game farms, forest nurseries, or experimental stations. It has the power to sell or exchange lands; to establish and maintain forest protection systems; and to co-operate with any persons, firms, corporations, or governmental agencies for purposes consistent with the administration of the conservation program.

The authority granted by chapter 23.09 W. S. to the Wisconsin Conservation Commission makes its power broad and important. This form of conservation administration is being studied by many states throughout the country.

Organization

It is the policy of the Wisconsin Conservation Commission to meet once a month either in the Capitol at Madison or at some point in the state to consider the problems relating to conservation work and to establish and direct regulatory policies. Meetings are frequently held at various points throughout the state in order that the commissioners may study the many conservation problems of Wisconsin at first hand. The officers of the commission are a chairman and a secretary.

The conservation commission employs a conservation director who is an administrative officer and is responsible to the commission for the operation of the projects inaugurated by the commission or by the several trained men directing the different divisions of the conservation commission. He is the executive officer of the commission. There is a deputy director who acts as assistant and office manager.

Six divisions constitute the working organization of the conservation commission. Each of these, while it has its own distinct functions, correlates its work closely with the other divisions so that the result is an efficiently operated and inter-related group of projects under one director.

The six divisions which constitute the working organization of the commission are: forestry and parks; forest protection; fisheries; game; law enforcement; and education and publications. It is the responsibility of the administrative officer of the commission to correlate the activities of the six divisions so that policies formulated and directed by the commission itself are carried out by the different divisions.

Administrative Activities

First in importance among the activities of the administrative division is the collection and disbursement of funds. Extra care and effort have been expended during the biennium in the collection of moneys due to the commission from its various activities. Prompt settlement of accounts due the commission makes possible additional income from interest earned by money in the conservation fund.

Except for the 1/20 mill tax for forestry purposes, the money from which first became available on March 1, 1930, the entire conservation program in Wisconsin is paid for from moneys earned by the commission in its various activities. Prior to March 1, 1930, there had never been any taxation money spent on the conservation program.

The funds for the conservation commission are received principally from the sale of the several licenses issued by the commission, chief among which are resident hunting licenses and non-resident fishing licenses. There are also trapping licenses, trap tags, and various

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kinds of commercial fishing licenses. All of these licenses and tags, even though they are sold to the ultimate user by subsidiary agencies, must be handled through the administrative office at Madison. The actual work entailed in distribution of licenses has been greatly increased during the biennium by the adoption of a new policy that hunters, trappers, and non-resident fishermen must wear license buttons in addition to carrying their licenses. Each of these buttons is numbered serially to correspond to the number on the license.

Another new activity added during the biennium is the issuance of deer farm licenses and game bird farm licenses. With these, as with muskrat, beaver, and general fur farm licenses, all applications must be investigated before the license is issued.

Records are kept in the administrative division of the activities of each of the different divisions. One of the more important records is the complete accounts maintained of all arrests and seizures made by conservation wardens. Complete individual records are kept of each case and of each seizure.

Special Administrative Activities

In addition to the office personnel of the administrative division there is, at times, a field investigator who supplements the work of the office in checking expenditures in the field and in looking after activities in distant parts of the state which are not frequently reached by other officials. This investigator also checks court cases to see that proper remittances are made to the various state funds.

Another and new activity of the administrative division is that represented by the establishment of the predatory animal control division in co-operation with the United States Biological Survey. This predatory animal control is an experiment being carried on in an effort to reduce the amount of money spent by the state each year in payment for bounty claims. For the past two bienniums the amount paid for bounty claims has averaged approximately \$80,000 a year.

The 1929 legislature made a small appropriation to carry on this predatory animal control experiment in co-operation with the United States Biological Survey.

The federal government loaned to the state the services of a leader in predatory animal control work who during the last six months of the biennium organized with the State Bureau of Personnel a force of state trappers. The work had not progressed far enough at the close of the biennium to make a detailed report or to draw conclusions as to the effectiveness of this method of control in Wisconsin.

Co-operation

During the past two years the Wisconsin Conservation Commission, through the administrative division, has increased its co-operation with other Wisconsin state departments, with departments having similar or related interests in other states, and with the federal government. During the biennium several meetings have been held with

conservation officials from neighboring states to discuss the codification of game laws, uniformity of opening and closing seasons and bag limits, forest land taxation, and forest protection.

Advisory Council

An advisory council, consisting of a group of persons representing different sections of the state selected because of their interest in conservation matters, was established by the conservation commission at the beginning of the biennium. This council is made up of men and women, and the commission frequently requests information and advice from them in the consideration of new activities and the formation of new policies.

WISCONSIN CONSERVATION DATES

	Chapter	Year
ish Inspector.	77	1866
ommission to Investigate Forestry Conditions	36	1867
imber Agents	46	1869
ommissioner to Receive Spawn	253	1874
ish Commissioners	299	1878
stablishment of first State Park	824	1878
ame Wardens	456	1887
ish Wardens	455	1887
tate Fish and Game Warden	486	1891
ommissioners of Fish and Fisheries	221	1895
hief clerk of land commission made State Forest Warden	266 i	1895
Commissioners to Plan for Forestry Department	229	1897
ale of first State Park lands	367	1897
nterstate Park Commission	102	1899
nterstate Park Commission	305	1901
tate Department of Forestry	450	1908
Provision for purchasing state forest reserve	450	1908
commissioners of Interstate Park of the Dalles of the St. Croix	895	1905
State Board of Forestry.	264	1905
State Forester	264	1905
State Park Board	495	1907
Superintendent of Fisheries	548	1907
First Conservation Commission	644	1911
	0.14	1915
Adverse Supreme Court forestry decision	406	1915
Second Conservation Commission	118	1928
Third Conservation Commission—Conservation Commissioner	426	1927

DIVISION OF FORESTRY AND PARKS

FORESTRY

Introductory

Progress has been made in practically every phase of forestry during the biennium. While the legal basis for both public and private forestry had been built up during the past decade, much constructive forestry legislation was passed by the legislature of 1929 largely because of the work of the Joint Interim Committee on Forestry.

The forest crop law which was amended for better administration is now regarded as the most successful state law of its kind. Registration under this act has grown to 300,000 acres in three years, which exceeds the acreage in other states with similar laws although some of these have been in effect for many years. Outstanding private forestry projects have been undertaken by several wood-using industries to provide future raw material supplies for their mills. Such permanent industries will provide employment and pay taxes after other mills have shut down for lack of timber supplies.

The authorization for federal purchase of land for forestry up to a million acres will enable the United States Forest Service to assume a considerable part of the task of restoring Wisconsin's forest wealth. Lands have already been acquired in the older areas and a considerable acreage was reforested during 1930.

For the first time a definite tax for forestry as authorized by the constitutional amendment of 1924, was provided by the legislature. This act carried the levy of 1/20 of a mill on the taxable property of the state and yielded \$294,821.58. The appropriation act relating to forestry was changed so that all forestry costs are now chargeable to this fund. Heretofore, the greatest part of the forestry work was supported from the conservation fund, derived chiefly from receipts for resident hunting and non-resident fishing licenses. The mill tax for forestry is an annual levy and will do much to stabilize and strengthen the forestry work of the state. The first appropriation had to cover a period of 20 months from July 1, 1929 to March, 1931 which curtailed some activities and delayed others.

The commission was also given authority to sell or exchange state forest lands for the purpose of building state forests.

Because in Wisconsin, unlike most states, tax delinquent lands revert to the county, practically all northern counties are acquiring large areas of tax delinquent lands. The following legislation was passed to give county boards needed authority to cope with the problems growing out of tax delinquency:

- (a) The procedure for establishing county forests was simplified.
- (b) Counties were authorized to exchange lands to block county forests.
- (c) The county zoning law was amended to include zoning for agriculture, forestry and recreation.
- (d) A serious obstacle to the taking of tax deed by counties was removed. Previously, payment of taxes to the town was required at the time of taking deed, but the law was amended to defer such payment until the land or timber from the land was sold and the liability of the county is limited to the sums thus received.



Section of Trout Lake Nursery.

State Forestry Activities

The state forest nursery located at Trout lake in Vilas county has continued to produce forest planting stock both for planting on state land and for sale to private interests for forest planting. Order blanks for these seedlings, stating prices and terms, may be secured on request from the conservation commission.

The following table shows the stock shipped from the state nursery for private planting each year from 1914 to 1930:

STATE NURSERY SHIPMENTS FOR PRIVATE PLANTING 1914-1930

	No. of		No. of
Year	Trees	Year	Trees
1914		1923	177,300
1915	77,400	1924	246,800
1916	110,200	1925	350,500
1917	272,900	1926	854,000
1918		1927	1,038,000
1919		1928	1.132.000
1920		1929	
1921	199,400	1930	
1922			_,,,

In 1929 for the first time, seedlings were shipped from the state forest nursery to every county in the state.

Planting

Reforestation on state forest lands was expanded during the biennium, two portable field planting camps were constructed and two tractors were acquired for plowing furrows. The acreage planted in both 1929 and 1930 exceeded that of any preceding year. Planting plans for 1930 called for a still greater acreage, but the continued drought delayed the date when fall planting could begin, thus shortening the fall planting season. During the biennium approximately 2.250,000 trees were planted on state land.



Norway Pine Plantation in Peninsula State Park. Fifteen years old.

Examination of the state forestry lands showed that a large proportion has good stands of second growth because these areas have received protection from fire since 1911.

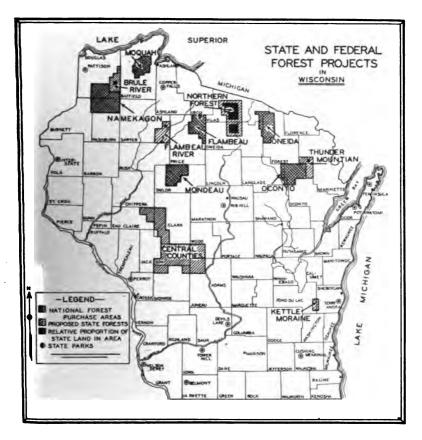
Co-operative Projects

The co-operative agreement with the University of Wisconsin for extension work was continued. This work was largely with farmers and other small land owners. Some of the earliest farm plantations can now be used as demonstration areas for furthering this work. Forest planting and wood lot improvements were continued and several bulletins were prepared.

The junior forest ranger project, administered by the boys and girls club department of the College of Agriculture was expanded and

the commission supplied free seedlings for forest planting to these boys. The summer camp for leading boys was conducted at the Wildcat lake ranger station both in 1929 and 1930, and all needed facilities of the commission were made available for this course. The commission likewise co-operated with the Boy Scouts in conducting an instruction camp near Trout lake.

Co-operation with the Lake States Forest Experiment Station was continued and the commission provided men for the field work on



several research projects. Likewise the commission co-operated with the land economic survey of the department of agriculture and markets during the biennium. This survey covered several areas in which the state is the chief land owner as in Vilas and part of Oneida county, and also in parts of Ashland and Sawyer counties.

The co-operation with the Commissioners of Public Lands, seeking better protection of all state owned lands, has been continued. Practically all of the trust fund lands are located within forest protection districts, and state rangers are charged with protecting these lands

both from fire and from timber trespass. The jurisdiction of the Commissioners of Public Lands and of the conservation commission over the various classes of state owned land has been more sharply defined both by legislative act and by opinions of the attorney general's office.

The Forest Crop Law

Since timber is legally part of the land, it is taxed as real estate under the general property tax. But where land is used to grow timber the timber is actually the crop or income. The forest crop law provides for registry of lands used for forestry, taxing the land annually and the timber or crop once when it is cut and the income is realized.

Owners who enter lands under the forest crop law follow forest management plans which must be approved by the conservation commission. Provision is made for rejecting lands when the owners fail to carry out adequate plans for growing timber.

FOREST CROP LANDS-JUNE 1930

County Ashland Bayfield Barron Burnett Chippewa Clark Douglas Eau Claire Florence Forest Iron Jackson	10,985.84 960 1,725.53 16,480 4,037.20 3,080 3,480 3,040 48,060 5,880 160	County Marathon Marinette Oconto Oneida Polk Price Rusk St. Croix Sawyer Shawano Taylor Vilas	14,860 2,920 27,432 1,320 28,005.29 15,901.17 92.50 19,828.15 406 1,400 4,603.24
Iron	5,880 160 160 12,789.22	Taylor	1,400 4,603.24 226 6,480

County Forests

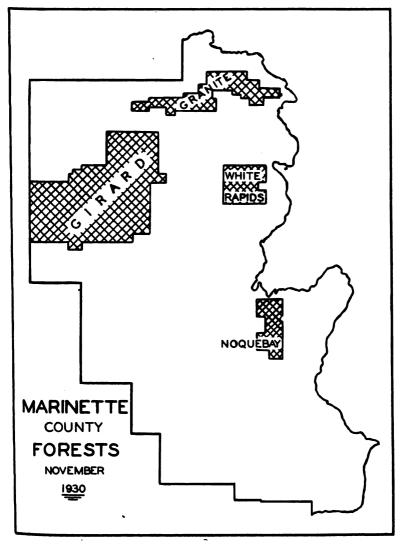
The legislature of 1927, realizing that counties were acquiring land through non-payment of taxes, and that these lands were valuable primarily for forestry, authorized counties to establish county forests. The procedure was simplified by the legislature of 1929 and additional counties have authorized county forests.

The forest crop law was amended in 1929 making it possible for counties to enter forest land under the law and further exempted them from paying the owners' share of 10 cents per acre. The state, however, will pay 10 cents per acre per year which goes to the towns and will collect the 10 per cent severance tax when timber is cut, as with other owners.

This 10 cents per acre to the towns provides an incentive for the entry of county forests under the forest crop law. The commission has pointed out, however, that its interest is not primarily to provide state funds for the towns, but in establishing county forests under

the provisions of a law which will aid the local tax situation while the forests are being restored.

The Joint Interim Committee on Forestry, in its report to the legislature of 1929, recommended (first paragraph, page 38) that the conservation commission work with the county authorities in the selection, care, and improvement of their county forests. This the commission has endeavored to do. Langlade, Marinette, Rusk, and Wash-



Marinette county owns 88,193 acres, or 55½ per cent of the land within the boundaries of these forests.

burn counties have already entered land under the forest crop law. Of these, Marinette county must be credited with the greatest progress, having recently established and designated by name four county forests in which the county holdings total 88,193 acres. All of this will be under the forest crop law next year.

The commission feels that county forest lands entered under the forest crop law should consist of reasonably well blocked lands rather than all scattering descriptions which may have reverted to the county. In fact, the conception of county forests as considerable areas of fairly well blocked lands is an expression of the intent of the legislature, since the session of 1929 authorized counties to exchange lands to block up county forests. The work of the farm and forest survey committee of the Marinette county board is a splendid example of orderly and controlled development growing out of the constructive legislation of the session of 1929.

State Forest Project

A state-wide forestry survey which was conducted by the division during the biennium, resulted in the definite establishment of six proposed areas for state forests. The purpose of the survey was to determine the areas in the state best adapted to forestry purposes and which could be acquired by the state without excessive expenditure.

The six proposed forest purchase areas are: (1) the Brule river district in eastern Douglas county comprising approximately 92,000 acres, of which the state owns 5,600; (2) the Flambeau river district in Sawyer county comprising approximately 100,000 acres, of which the state owns 4,800; (3) the district north of Rhinelander in Vilas and Oneida counties which includes Northern Forest State Park, and American Legion Memorial State Park and Forest Preserve with a gross area of 265,000 acres, of which the state now owns about 140,000; (4) the Thunder Mountain district in Marinette and Oconto counties comprising approximately 190,000 acres, of which the state owns about 4,000; (5) the central counties district including parts of Jackson, Clark, Monroe, Wood, and Juneau counties comprising approximately 350,000 acres; and (6) the Kettle Moraine district in Fond du Lac and Sheboygan counties comprising approximately 50,000 acres.

The first four of these areas are located in districts of which the state is already the owner of considerable land. This is particularly true with the Vilas and Oneida counties tract where the state now owns the majority of the land within the proposed area. Although the conservation commission does not have jurisdiction over all the state owned lands in these districts, putting the land to forestry use will be acceptable to the state land commission, the other owner of state lands.

All of the areas except the Kettle Moraine are within forest fire protection districts where actual supervision is now maintained by the conservation commission.

Setting aside these proposed state forest areas is in line with the instructions of the people in the state expressed in the forestry referendum of 1924 which directed the conservation commission to "acquire,

preserve, and protect" the forests of the state. It will be made possible by the action of the last legislature in providing funds by the 1/20 mill tax which is to be used for forestry and reforestation purposes.

The land included within these proposed state forests, while primarily set aside for forestry, will also serve the public as recreational, hunting, and fishing grounds. All areas set aside for forestry in Wisconsin will be administered to give the maximum benefit to the people of the state at the present time without impairing the value of the lands as future forests.

Acreage of State Forest Plantings

Year	Acres Planted	Total Output of Forest Nursery
911	159	
912	8	
918	- 99	
914	490	
915	No planting	done
916	49	300,000
917	837	700,000
918	425	850,000
919	315	500,000
920	99	350,000
921	220	450.000
922	109	130,000
923	140	350,000
924	121	400,000
925	136	500.000
926	415	1,200,000
927	635	1,600,000
928	654	1,700,000
929	940	2,400,000
930	1,221	2,400,000
Total acres planted	6,572	13,830.000

Output of State Forest Nursery in 1929

Species	For Private Plantings	For State Plantings
White Pine	504,035 550.760	93,500 511.000
Jack Pine	165,250	401,000
Scotch Pine	47,585 102	7,750
Norway Spruce Blue Spruce	124,560 975	9,500
Total	1,393,267	1,022,750 2,416,017

Output of State Forest Nursery in 1930

Species	For Private Plantings	For State Plantings
White Pine Norway Pine Jack Pine	407,600 - 450,850 48,100	90,000 640,000 415,500
Scotch Pine White Spruce Norway Spruce	73,150 30,650	9,000
Total	1,184,700	1,221,500 2,406,200
Total for biennium		4,822,217

Inventory of Stock in Trout Lake Nursery

Fall of 1929

TRANSPLANTS

Species	Age	Height in Inches	Amount	
White Pine White Pine Scotch Pine Norway Pine Norway Pine Norway Spruce Norway Spruce Jack Pine	2-1 2-2 2-1	2"— 3" 5"— 8" 2"— 4" 2"— 4" 6"—10" 2"— 4" 4"—11" 5"—10"	180,000 260,000 9,000 95,000 80,000 197,000 290,000 89,000	
Total			1,150,000	1,150,000

SEEDLINGS

Species	Age	Height in Inches	Amount	
White Pine White Pine White Pine White Pine Norway Pine Norway Pine Norway Pine White Spruce White Spruce White Spruce White Spruce Norway Spruce Norway Spruce Norway Spruce Scotch Pine Jack Pine Jack Pine Jack Pine	1—0 2—0 3—0 1—0 2—0 3—0 1—0 2—0 3—0 1—0 2—0 3—0 1—0 2—0 3—0	2"- 3" 3"- 6" 2"- 8" 4"- 7" 2"- 4" 3"- 7" 2"- 4" 3"- 8" 2"- 3"	480,000 1,030,000 350,000 1,120,000 1,300,000 630,000 520,000 350,000 425,000 425,000 360,000 210,000 210,000 180,000	
Total			8,315,000	8,315,000
Total Inventory of Nursery				9,465,000

Inventory of Stock in Trout Lake Nursery Fall of 1930

TRANSPLANTS

Species	Age	Height in Inches	Amount	
White Pine White Pine White Pine Scotch Pine Norway Pine White Spruce Norway Spruce Norway Spruce Norway Spruce		2"— 3" 5"— 8" 6"—12" 2"— 4" 2"— 4" 2"— 4" 4"—11" 6"—14"	**76,000 130,000 80,000 **72,000 **139,000 **122,000 **121,000 132,000	
Total				1,017,000

SEEDLINGS

Species	Age	Height in Inches	Amount	
White Pine White Pine White Pine White Pine Norway Pine Norway Pine Norway Pine White Spruce White Spruce White Spruce White Spruce Norway Spruce Norway Spruce Norway Spruce Norway Spruce Norway Spruce Norway Spruce Scotch Pine Scotch Pine Jack Pine Jack Pine	8-0 1-0 2-0 8-0 1-0 2-0 8-0 4-0 1-0 2-0 8-0 4-0 1-0 2-0	2"— 3" 3"— 6" 2"— 3" 4"— 7" 2"— 4" 3"— 7" 2"— 4" 3"— 8" 6"— 8"	**500.000 480.000 832.000 **9950.000 1,120.000 909.000 **275.000 460.000 350.000 **820.000 160.000 425.000 **10.000 160.000 **18.000 **580.000 720.000	
Total				8,494,000
Total Inventory of Nursery	- -	l		9,511,000

^{**}Trees that should not be listed for distribution.

FOREST PROTECTION—1929

Introductory

The fire season of 1929 was one of unbroken hazard, rising during the middle of August and into September to an extremely dangerous degree. The break-up in the spring came relatively early. April was warm and dry, and May was cold, dry, and very windy. Vegetation was slow in greening out. The normal late summer rains failed to materialize. August was very dry. Low humidity prevailed for days at a time and supplemented by continuous hot, dry southwest winds developed several very dangerous dry times. The precipitation for the year was more than two and one-half inches below normal.

Under such weather conditions it is not surprising that the number of fires increased greatly. Fires reported totaled 960. This is more than double the number of fires reported for 1928 and far exceeds the average number reported during the past five years. The number of acres burned over exceeded 100,000, which is also above the five-year average. As usual, under such weather conditions, most of the area burned over was from relatively few fires which got away and ran over large areas. About one per cent of the fires accounts for the burning over of approximately half of the total area, and these fires were largely in grass or sweet fern country on which comparatively little tree growth was found. In one area a relatively large fire burned over land covered with a heavy growth of timber slash. The late summer fire season was a difficult one, the soil being so dry. A condition developed where fires could scarcely be put out except by soaking rains.

The season cannot be considered as anything but a bad year. During periods of from several days to as long as three weeks, the risk from fires could not have been very much worse. The diligence of the field force is proven by the fact that most of the fires were held to relatively small areas. The effects of the forest protection effort of the past few years was noticeable in the older fire districts in the behavior of the local people during these dry times with the use of fire. There are still some evidences of carelessness with the use of fire in many neighborhoods, especially with the burning of marshes and the burning over of blueberry land in the central counties. If it had not been for the steady effort of the district forest rangers and their associates, supported by constructive aid from citizens, the area burned would have been much greater. The woods and weather conditions were just right for widespread burning, not only once, but a number of times during 1929.

During the past five years slash-covered areas have increased until there is not less than 300,000 acres now existing in the northern

counties, and this area is being added to yearly. Extending the forest protection work into the marsh areas of central Wisconsin has added an area of considerable risk. The custom of burning these marshes annually is a serious hazard.

Progress During 1929

The construction work during 1929 was slowed down by the continuous need to fight fires. However, the area under protection was increased by the definite addition of District No. 10. At the beginning of 1929 twelve and one-half million acres were under protection. At



Picture taken immediately after a fire in 1911. Northern Forest State Park road.



Same view taken in 1930 showing effects of 19 years of forest protection.

the end of 1929 thirteen and one-half million acres were under protection, an increase of one million acres.

The equipment in the various districts was increased as follows: 12 new lookout towers were erected; two were replaced; practically all open lookouts were enclosed; one ranger headquarters (Friendship) completed; one sub-station (Mercer) completed; metallic circuit state-owned telephone line increased by 76 miles; ground circuit state-owned telephone line increased by 29 miles; state wire on rented poles increased by 51 miles. There were 2,100 roadside signs replaced, including 415 new wooden signs. The transportation facilities were increased at the end of the season by the addition of 12 one and one-half ton trucks and 11 light pick-up cars.

Considerable repair work was done such as tightening, repairing and brushing out telephone lines; painting and repairing equipment; and improving the district ranger headquarters. Eighty-six active state-owned lookout towers now comprise the fire detection system. Improvements were also made in the methods of keeping records and the enforcement of the burning permit law.

Public Relations

*2 *****

As indicated heretofore, the attitude of the local people on the forest fire question had a real test the past season. While in a number of cases a break-down occurred, the prevailing attitude was very encouraging. With a dangerous dry time at hand there was a noticeable interest on the part of all citizens and companies to use extreme care with fire in the woods. A recognition of the burning permit law was in evidence in all districts. Approximately 1,500 burning permits were issued during the season in one district alone. Very few cases of complete lack of co-operation on the part of the local citizens occurred. The people and companies of the upper counties realized the benefits to be derived from protecting the country from uncontrolled fires and are guided accordingly.

FOREST PROTECTION DISTRICTS

Personnel—Equipment, 1929

Forest District No.	1	2	8	4	2	9	7	80	6	10	11	Total
Seasonal men in field	2	-	တ	4	81	80	8	80	H		61	
mergency men in field.	8	9	9	2	88	88	20	36	45	9	88	428
Telephone lines in miles State owned metallic	61		45	8	2	60	21	20	12			156
State owned ground	8.	99	202	47	75	11.0	9.	16	7:	25	12	618
State wire rented poles.	ю		9	20		3	-		÷	¥2	•	007
Erected 1929	-	1	-				8		7	61		12
Previously erected	∞	9	2	7	6	œ -	4	6	₹0	4	140 F	7,
Co-op lookouts			0	-6	-6	→ 6				1	-	
Hose in Feet.	1200	1.50	2.400	2.000	2000	2.250	1.700	1.000	2.000	1.000	-	21.276
Telephone poles used	3.040	2,040	7,716	1,667	3,800	672	902	1,225	3,185	400	•	25,127
Trucks	4	8	2	8	8	8	တ	8	8	æ ;		æ ;
Shovels	200	525	1,200	200	760	790	240	089	275	150	•	6,920
Axes	940	200	09,	Siç	2.0	193	5,	200	940	26		,
Palls	200	100	120		222	212	92	250	52	9		1,88.1
Smith Fire Pumps	35	120	100	116	148	100	150	150	9	50	71	1.178
Saws	8	9	12	-	8	00		100	18	10		8
Trailers	-		2	-	-	2		_	2			12
Tanks	-	1	-	21	63	-		63	8	1		=
Lanterns	24		30	4 0	84	2		99	23	18	28	386
Sack Fire Torches	901	100	20	9 9	9	29		22	29	9		678
Tool Boxes	စ္တင်	27	99	61	≋.	4.		စ္တင	æ °	12		88
	_	-	7	•	_	_	_	~				3

SUMMARY OF FOREST AND MARSH FIRES FOR THE YEAR 1929 AS REPORTED BY DISTRICT FOREST RANGERS

District	No. of Fires	% of Total Fires	Acres Burned	Acreage burned per fire	Reported Damage
1	104 138 62 47 126 91 169 26	10.9 14.4 6.5 4.8 13.1 9.4 17.6 2.7	28,660 7,999 1,316 4,400 4,608 2,890 6,191	276 58 21 93 37 82 36	\$13,327.00 5,325.00 1,718.00 7,523.00 3,218.00 6,652.00 3,874.00 1,001.00
9	103 11 83	10.7 1.2 8.7	21,721 5,847 19,752	228 531 238	20,904.00 6,000.00 3,228.00
Total	960	100%	103,888	108	\$72,770.00

FIRE BY CAUSES

Dist.	Light- ning	R. R.	Log- ging	Clear- ing	Camp Fires	Smok- ers	Incend- iary	Misc.	Un- known	Total
1 2	1	14 . 7	8	11 60	4 8	38 21	1 23	2 11	33	104 138
8 4 5	1 12	14 3 33	5	. 7	10 5 5	9 4 29	2	3 7	19 20 38	62 47 126
6 7 8		10 9 4	1 8	17 64 8	17 13	29 29 29 12	1 19	4 6	12 26	91 169 26
8 9 10		12 2 2	i	21 1	14	18	18 5	6	23 2	103 11 83
Total	15	110	18	211	88	217	67	39	22 195	960

FIRE BY MONTHS

District	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
1		9 28	41	6	6 8	25	10	7	
2	1		47	12	8	15	10	17 2	
3		10	25	5	4	13	3	2	
4		14	9	3	1	5	14	1	
5 .	1	31	36	18	6	10	14	9	1
6		11	32	9	6 2 3	15	10	12	
7	2	32	61	5	3	23	20	23	
8	1	1	10	5 3 9	l	1	7	4	
9		24	28	9	2	6	16	18	
10						5	1	4	1
11	3	12	22	9	8	9	11	7	2
Total	7	172	311	79	40	127	116	104	4
Per cent	.7	17.9	32.4	8.3	4.2	13.3	12.	10.8	.4

FIRES BY AREA CLASSES 1929

	A	В	С	D	E
District	Under ¼	1/4 to 10 acres	11 to 100 acres	101 to 500 acres	500 acres and over
1 2 3 4 5 6	2 8 7 12 3 1	37 59 26 18 56 87 34 13	49 60 26 19 52 42 123	11 15 8 9 5 9	5 1 1 1
9 10 11	i	32 1 26	50 8 28	15 27	5 2 7
Total	80	839	463	105	28
Per cent	8.1	35.3	48.4	10.9	2.8

COSTS AND AREAS BURNED

Year	Total Cost of Protection	Area Under Pro- tection in Millions Acres	Cost per Acre in Cents	No. of Fires	Area Burned Over	Acre- age Per Fire	% of Area Burned	Dam- age
1924	\$ 32,688.63 57,978.44 81,151.96 98,617.81 187,751.90 164,660.28	3.0 7.2 7.2 8.6 12.5 13.5	1.09 .8 1.13 1.15 1.1 1.22	248 415 238 229 480 960	76,466 278,084 84,585 12,198 44,189 103,888	809 660 859 58 103 109	2.5 8.8 1.2 .14 .85	\$29,056 408,560 209,170 9,452 27,627 72,770]

EXPENDITURES

Year	Contributed by State	Contributed by Federal Government	Contributed by Counties	Total Cost of Protection
1929	\$110,989.71	\$38,137.40	\$15,583.17	\$164,660.28

ALLOTMENT OF EXPENDITURES

Year	Administrative Expense	Field Personnel	Equipment and Improvements	Fire Fighting	Total Cost
1929	\$8,000.00	\$77,645.51	\$52,848.40	\$31,166.37	\$164,660.28

FOREST PROTECTION—1930

Introductory

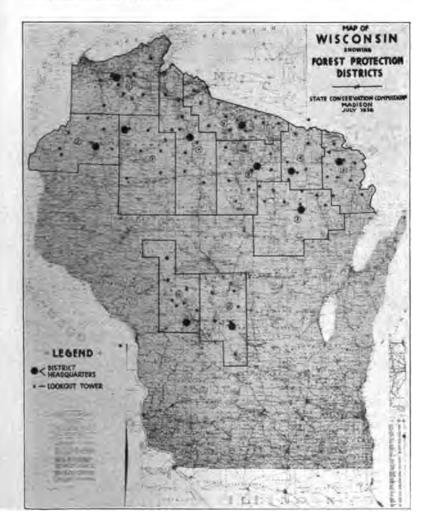
Wisconsin has just gone through the most extreme fire hazard which the state has experienced since 1894. Added to the precipitation shortage of 1929 was a very light snowfall during the winter. An unusually early spring break-up brought grass fires before the end of February, an unheard-of occurrence. The shortage of precipitation was shown by the low stage of water in streams and storage reservoirs. Hydraulic power plants were conserving water in the spring, whereas normal years bring spring floods and the wasting of water at power dams. Swamps were without water and soon became dry enough to burn. Normally, swamps serve to stop fires, but this year swamps burned worse than uplands.

The fire risk remained unbroken, for occasional rains were not sufficient to overcome the cumulative shortage of moisture. The dry soil quickly absorbed the rain, and clear weather and southwest winds dried out the vegetation. Special fire weather telegraphic reports from the weather bureau continually warned of low relative humidity and high fire hazard. Instead of decreasing during the summer, the risk continued to increase and by August the situation was acute. A study of fire hazard in Wisconsin made by the Lake States Forest Experiment Station reveals that there are 540,000 acres of logging slash less than five years old. Normally, the heavier soils on which this hardwood slash is found do not dry out as readily as the sandy pine lands. But this year due to the prolonged drought, the hardwood slash areas were fully as dry as the sand areas and there was more fuel on the ground. The hardwood slash areas and the swamps constituted the most dangerous areas in 1930.

Reports from the forest protection districts show that more fires occurred in 1930 than in any previous year since organized forest protection began. Of course, the area under protection was larger than ever before, but the number of fires is primarily a result of the high hazard conditions. The fire in the drained marsh area of Wood, Juneau, and Jackson counties is also the largest fire on official record, totaling 120,000 acres, or more than the total burned acreage reported in 1929, which was considered a bad year.

Drought and wind made fire fighting very difficult this year. The humus of the soil continued to burn after the fires were checked and the wind fanned the embers into flame, making it necessary to patrol fires long after they were under control. Consequently equipment

became scattered and was not always quickly available when new fires were reported. The motor pumps were not as effective as in other years because water holes and small streams were dry. Altogether, the rangers and their assistants carried a heavy burden under most discouraging conditions.



In the face of this situation 102 fires were extinguished before they reached one-fourth of an acre in area, 664 fires were held to less than 10 acres, and 929 to less than 100 acres. Only 26.4 per cent of the fires exceeded 100 acres. A few very large fires account for the high figure of 224 acres burned per fire.

In spite of this exceptionally high figure, the field force must be credited with doing a creditable piece of work. No lives were lost and loss of improvements by settlers was low. What would have happened in 1930 without a protection organization is not a pleasant subject to contemplate.

Payment of Fire Fighters

Prompt payment of men hired to fight fire has always been a problem since the beginning of the project. In a year of many fires most of the fire fighters are employed by emergency wardens, many of whom are better at directing fire fighting than at making out payrolls. After payrolls are received by the ranger, he must take the information for his records before sending them in. Often he must make corrections which require checking in the field. And during prolonged periods of fire both emergency wardens and rangers will neglect payrolls to fight fire.

The severe fire season necessitated the employment of extra clerks in the commission office to prepare payrolls. During the season nearly 20,000 checks were sent out to fire fighters. An organization built up to meet the needs of the usual serious fire season was forced to carry an excessive load in 1930.

Construction and Improvements

Construction and improvements are usually left for periods of low fire hazard when the field force can profitably be used for such work. Most of the new equipment is normally purchased after the season is advanced far enough to show that funds may safely be used. Both the work and the expense of fire fighting have prevented much improvement during the past season. The remaining open lookout towers were enclosed and two new towers were erected. In District No. 3, including Vilas and Oneida counties, it was necessary to convert the ground circuit telephone system to a metallic circuit because of the erection of electric transmission lines in this territory. Telephone connections were provided for three towers during the season and the construction of a commercial line in Adams county improved the fire reporting service in District No. 11.

Public Relations

Following the appointment of a chief forest fire warden in May, there was little opportunity for other than fire fighting activities. After the large fire in Wood, Juneau, and Jackson counties a meeting of the emergency wardens and others who had supervised crews, was held to straighten out the tangled payrolls which had resulted from shifting men from one sector to another on the 97 mile front.

Since October the chief fire warden has met with one county board committee and six county boards. There is obvious need for closer contact with county authorities because the counties are required to pay half of the direct fire fighting costs. It is planned to work out some of the questions which have arisen by meeting with the conservation committees of the county boards. The recent organization of the Inter-county Conservation Association offers an opportunity to work with an official and interested group on problems which are of more than local application.



Plowing a fire line. Marengo fire, 1930.

SUMMARY OF FOREST AND MARSH FIRES FOR THE YEAR 1930

AS REPORTED BY DISTRICT FOREST RANGERS

District	No. of Fires	Per cent of Total Fires	Acres Burned	Acreage burned per fire	Reported Damage
1	162	7.0	86,050	223	\$28,878.20
2	194	8.4	22,304	115	19,040.00
3	128	5.5	9,072	71	10,159.50
4	151	6.6	40,969	271	14,000.00
5	265	11.6	88,815	146	19,605.40
6	296	12.9	47,100	159	43,340.00
7	299	13.0	86,180	121	83,370.00
8	141	6.1	23,620	168	21,155.50
9	291	12.7	83,825	288	69,055.00
10	162	7.0	76,756	474	60,800.00
11	211	9.2	99,705	478	141,225.00
Total or Average	2,300	100%	518,856	223	\$460,627.60

FIRES BY CAUSES

District	Light- ning	R.R.	Log- ging	Clear- ing	Camp Fires	Smok- ers	In- cend- iary	Misc.	Un- known	Total
1 2	1 4	9 13 9 6	1	27 100 12 14	15 13 24 12	52 19 15 18	5 25 11 62	8 15	45 8 53 15	162 194 128 151
5 6 7	1 7	20 18 17	1 11 7	16 73 118	8 16 19	75 99 51	11 30 42	20 22 13 15	111 29 80	265 296 299
8 9 10 11	8	17 6 18 17	8	27 46 36 19	6 10 13 18	84 16 10 68	8 5 12 20	2 2	200 71 69	291 162 211
Total	24	150	23	488	154	507	226	.97	631	2,800
Per cent	1.1	6.5	1.0	21.0	6.7	22.1	9.8	4.2	27.0	100%

FIRES'BY MONTHS

District	Mar.	April	Мау	June	July	Aug.	Sept.	Oct.	Nov.
1 2	21	40 106 21	20 9 12	9 2	2 10 4	62 28 64	26 20 23	1 2	2 1 4
4 5 6 7	2 5 10	57 80 133 151	12 30 17 15	6 15 7 10	2 21 6 4	88 55 64 68	81 43 52 28	5 2 5	10 14 10 8
8 9 10	1 9 27	56 72 77 81	18 37 8 17	10 2 12 7 9	10 7 11	82 78 23 31	28 22 70 17 12	1 1 12	10 8 6 11 13
Total	75	874	195	79	81	588	344	29	90
Per cent	3.3	38.0	8.4	3.4	8.5	28.2	15.0	1.3	3.9

BIENNIAL REPORT

FIRES BY AREA CLASSES 1930

	A	В	C	D	E
District	Under ¼	1/4 to 10 acres	11 to 100 acres	101 to 500 acres	500 acre and ove
1 2	2 21 21	54 87	· 60 80	35 39	11
8 4		65 23	25 69	15 40	2 19
5 6	5 9 14	106 112	96 128	88 85	25 17
7 8		90 42	152 72	88 85 29 19 55	14 8
9 10 11	16 1 18	65 81 89	106 61 85	44 57	49 25 17
Total	102	664	929	401	204
Per cent	4.4	28.8	40.4	17.4	9.0

COSTS AND AREAS BURNED

Yr.	Total Cost of Protection	Area under Protection in Millions Acres	Ccst per Acre in Cents	Number of Fires	Area Burned Over	Acreage per Fire	Per Cent of Area Burned	Damage
1924 1925 1926 1927 1928 1929 1930	\$32,688.63 57,978.44 81,151.96 98,617.81 137,751.90 164,660.28 812,855 22	3.0 7.2 7.2 8.6 12.5 13.5	1.09 .8 1.18 1.15 1.1 1.22 2.3	248 415 238 229 480 960 2800	76,466 273,084 84,535 12,198 44,189 108,888 513,856	809 660 859 58 103 109 228	2.5 3.8 1.2 .14 .35 .77 3.8	\$29,056 403,560 209,170 9,452 27,627 72,770 460,627

EXPENDITURES

Year	Contributed by State	Contributed by Federal Government	Contributed by counties	Total Cost of Protection
1929 1930	\$110,989.71 188,131.85	\$38,137.40 43,783.48	\$15,583.17 85,940.44	\$164,660.28 812.885.22
Total	\$294.071.06	\$81,920.88	\$101,523.61	\$477,515.50

ALLOTMENT OF EXPENDITURES

Year	Administrative Expense	Field Personnel	Equipment and Improvements	Fire Fighting	Total Cost
1929 1930	\$3,000.00 6,857.82	\$77,645.51 108,112.49	\$52,848.40 31,084.52	\$31,166.87 171,880.89	\$164,660.28 312,855.22
Total	\$9,867.82	\$180,758.00	\$83 ,882 . 92	\$208,047.26	\$477,515.50

STATE PARKS

Introductory

Wisconsin was the first state to show an official interest in the acquisition of state parks. The first action was taken in 1878 when the legislature created what was known as "The State Park" containing 50,000 acres of timber lands in what was then Lincoln county. This park existed for 19 years but met a sad fate in 1897 when through legislative action the lands were sold to lumber companies. Part of the same area was later repurchased after the timber had been cut, and is now contained in Northern Forest State Park in Vilas county.

Just thirty years ago the state made a new beginning in acquiring state parks and since that time 16 areas varying in size from two acres to 150,000 acres and representing practically every type of scenic beauty and wild life peculiar to the Middlewest have been set aside as state parks.

The appointment of a committee in 1899 by Governor Edward Scofield to investigate park possibilities of the St. Croix river region in Polk county was the first official act in the new movement. Acquisition of lands in this area began in 1900 and a park was established the same year in co-operation with the State of Minnesota which established a park on the opposite side of the river. The areas on both sides of the river are known as Interstate Park.

The legislature of 1907 created the first state park board which reported to Governor James O. Davidson in favor of establishing a state park system. During the next few years two additional parks were acquired—Devil's Lake State Park in Sauk county and Peninsula State Park in Door county.

In 1913 the State Board of Forestry co-operated with the State Park Board to develop and improve the parks. One forester and several rangers were furnished by the State Board of Forestry to locate and construct roads and trails within the parks and prepare maps of the areas.

On July 1, 1915 the state park board, the state board of forestry, the fisheries commission, and the state game warden department were consolidated to form the conservation commission. Since 1915 administration of the constantly increasing number of state parks has been under the jurisdiction of the conservation commission.

Value of State Parks

State parks serve a very definite purpose in the complicated life of modern America. They provide playgrounds and vacation lands for all of the people. They furnish places for the casual afternoon picnic

Wisconsin State Parks

		6	True As	N. e.	A 44 of De-1-		How Reached
Name of Park	Location	(Acres)	quired	Estab.	Superintendent	Highway	Railroad
Interstate	Polk	680	Purchase	1900	St. Croix Falls	35, 8, 87	Soo'
Brule	Douglas	640	Gift	1906	Brule	61	N. Pacific
Peninsula Devil's Lake	Door Sauk			1910 1911	Fish Creek.	17 12, 113, 159	C. B. W. A. C. B. W. W.
Cushing Memorial Nelson Dewey Perrot	Waukesha Grant Trempealeau	1,650	Gift Purchase Gift	1915 1917 1918	*Delafield Wysluting *Trempealesu	18 35, 60, 18 167	C. M. St. P. & P. Burlington C. & N. W.
Pattison. Tower Hill	Douglas.	099	Git		Brule. Spring Green.	35 11	Burlington Soo C. M. St. P. & P.
Old Belmont Northern Forest Rib Hill	LafayetteVilasMarathon	150,755 160	Gift Purchase Gift	1924 1926 1927	*Belmont Trout Lake *Wausau	118, 80 51, 155 51, 29	C. & N. W. C. M. St. P. & P. C. & N. W.
Potowatomi. Terry Andrae. American Legion. Copper Falls.	DoorSheboygan Oneida	1,100 112 86,000 520	Purchase Gift Purchase Purchase	1928 1928 1929 1929	Fish Creek Sheboygan *Trout Lake	17, 78 141 47 13, 77	G. M. St. P. & P. G. B. & W. G. & N. W. C. & N. W. Soo

* No resident park superintendent.

as well as for the tourist who wishes to stay overnight or for a week. Some of Wisconsin's parks offer unexcelled opportunities for the camper who goes out for several weeks to live the life of several generations ago.

Aside entirely from the standpoints of public health and the preservation of historic and beauty spots of exceptional worth, state parks have a very definite economic value. The mere establishment of certain areas causes surrounding land values to increase, and as the park is developed, the assessable value of surrounding land continues to increase. The coming of hundreds of thousands of tourists each year to visit state parks certainly is of value to the communities through which they pass enroute.

In addition, each state park might be called a "conservation area" for here ruthless destruction of natural resources and natural beauties is not tolerated. Nature is permitted to regulate her own affairs in most state parks and the educational value of such areas to the people of the state is inestimable.

New Parks During Biennium

During the biennium three areas were added to the state park system, making a total of 16. The three added are Terry Andrae State Park in Sheboygan county, Copper Falls State Park in Ashland county, and American Legion Memorial State Park and Forest Preserve in Oneida county.

Terry Andrae State Park which comprises 112 acres, was given to the state by Mrs. F. Terry Andrae of Milwaukee. It is located on the shore of Lake Michigan about six miles south of Sheboygan. Copper Falls State Park was acquired by purchase from the Lake Superior District Power Company. It consists of 520 acres and is located four miles north of the city of Mellen. The new park in Oneida county was defined by legislative act to include all state owned lands within two townships in the northern part of the county.

Each of these areas is a valuable addition to the state park system and extensive improvements carried on in them following their acquisition during the biennium, have made each of the three areas accessible to the public. At the close of the biennium all of the state parks are in better condition than they ever have been.

Educational Uses for State Parks

During the biennium the commission adopted a policy to extend the educational uses of state parks to all groups interested in making use of them. In certain parks, Devil's Lake State Park principally, commercialism has been cut down as far as possible and the site formerly used by a commercial hotel is now saved for educational use. Boy Scouts and other groups have been invited to make free use of all state parks.

Closely allied with the policy for increasing the educational uses of state parks is the program for establishing state park museums. A beginning has been made at Devil's Lake State Park where a building has been set aside for museum use.

Through the courtesy of the Milwaukee Public Museum the commission acquired an adequate number of display cases for this first museum. It is planned to completely equip the Devil's Lake State Park museum and then to establish museums in other parks.

State Park Roads and Improvements

The aid for state park roads provided in the state highway law, was increased during the biennium from \$50,000 to \$150,000 per year. The law was amplified to include use of this money not only for construction and maintenance of highways on state parks' lands, but also on state forests and other state owned lands. The bulk of the money was spent for road improvements in and adjacent to definitely established park areas.



Lake Tomahawk. American Legion Memorial State Park and Forest Preserve.

The new road in and approaching Nelson Dewey State Park was completed; a new road was constructed in Potowatomi State Park; and material improvements were made in the roads in Northern Forest State Park, American Legion Memorial State Park and Forest Preserve, Terry Andrae State Park, and Devil's Lake State Park.

Special attention has been paid to the improvement of drinking water supplies and sanitary facilities in all of the state parks and additional camping ground and picnic ground equipment have been installed throughout the system. Development work, the building of trails, and installation of safety devices, have been carried on in Copper Falls State Park. Considerable development work was also carried on in the new Terry Andrae State Park.

State Park Survey

The forestry and parks division made a state-wide survey of sites available and desirable for state parks. This survey was well in

progress at the end of the biennium and will be of valuable assistance in the consideration of suggested sites in the future. It is becoming increasingly evident that sizeable areas of natural wilderness including lakes, rivers, forests, and native wild life, are necessary in a well rounded state park program, and it is vitally important that state parks be established on suitable areas at reasonable distances from large centers of population.

Only the most outstanding historic and scenic areas within the state and only those having particular significance to the entire state should be considered for a state park system. Because in Wisconsin there are so many attractive places which would make excellent parks, it is obvious that the state cannot own and take care of them all. Therefore, it is felt that there should be established systems of county and township parks to supplement the state park system. Such subsidiary park systems would be owned and regulated by the local governmental units and while they would serve local needs primarily, they would also be available as part of the general park program of the state.

Brief Description of Wisconsin's State Parks

Interstate Park, the oldest of the present system of state parks, is a co-operative venture in the perpetuation of beauty by Wisconsin and Minnesota. It is located on the Wisconsin boundary of the state along the Dalles of the St. Croix river. Interstate Park is one of the most popular of Wisconsin's parks partly because of the beautiful bluff and river scenery of the St. Croix river, and partly because of its easy access from the Twin Cities. In Interstate Park is located one of the largest trout hatcheries in the world, at St. Croix Falls.

The Brule State Park, close to Superior, was made famous throughout the world in 1928 when President Coolidge chose it as the site of the summer Whitehouse. The chief attraction in the Brule State Park is the river of the same name with the excellent trout fishing to be had in it.

In Peninsula State Park, located near the tip of the Door county peninsula, there have been set aside 3,400 acres of beautiful rolling land which fronts on Green Bay. Giant cliffs, against which break the waves of Green Bay, create the indescribably beautiful bluff and water scenery for which this park is justly famous. Beautiful woods and adequate camping facilities place Peninsula State Park among the favorites for the tourists who wish to camp for a long time. It is in Peninsula State Park that the state has located its game farm, and thousands of pheasants as well as wild American turkeys, prairie chickens, and other native game birds and animals add to the interest of the thousands of people who visit the park every year.

Devil's Lake State Park, situated in the heart of the Baraboo range near the famous Dells of the Wisconsin river, presents the most unusual bit of mountain scenery in the state. In Devil's Lake State Park, bluffs rise sheer for several hundred feet above a little lake which is a veritable jewel. From a geologic standpoint Devil's Lake reveals a most interesting history and has been said by geologists to

illustrate more principles of the science of geology than any other one district in the United States. To the biologist as well as the geologist and geographer, Devil's Lake offers many fascinating attractions. Here is the dividing line between northern and southern flora and fauna. Every year thousands of students visit Devil's Lake State Park to study science.

Cushing Memorial State Park in Waukesha county, is a delightful place to stop for a short time. An imposing granite shaft in memory of the three Wisconsin Cushings who won undying distinction in American military and naval activities, is located at the crest of the park and is the principal attraction in this small area.



Pines and dunes in Terry Andrae State Park.

Few grander sights can be seen anywhere in the world than the majestic view of the confluence of the Wisconsin and Mississippi rivers at Nelson Dewey State Park. Here one stands on the top of a mountainous bluff hundreds of feet above the rivers, looking for miles and miles up either of the river valleys. Immediately below is the Thousand Island section of the Mississippi.

Another area preserved by the state on the Mississippi river is Perrot State Park near Trempealeau. Outstanding in interest in this park is Trempealeau mountain—Hay-nee-ah-chah, or "Soaking Mountain" to the Winnebago Indians—which rises up from the shimmering backwaters of the mighty Mississippi. For nearly 250 years Trempealeau mountain has served as a landmark to Mississippi voyageurs.

Just south of the city of Superior is Pattison State Park where the Black river breaks over the range to form the beautiful Manitou

Falls—Gitchee-Manitou or "Falls of the Great Spirit". This water-fall is 165 feet high, the highest in the state.

A short distance upstream from Big Manitou Falls is Little Manitou Falls which serves as an excellent introduction to the glory of the larger falls below.

Tower Hill State Park marks the site of the old shot tower for the making of lead bullets in early days of Wisconsin's history. A village which for a time promised to develop into a city named Helena, was established here in 1831 by Daniel Whitney, a Green Bay merchant. For about thirty years the village of Helena flourished and then it vanished before the changing industrial and transportation methods, and now all that remains of it is an historic old cemetery and the shaft of the old shot tower.

The smallest of Wisconsin's state parks and yet one of the most interesting from its significant history, is Old Belmont State Park, the site of the first state capitol building of Wisconsin. It is located within a short distance of the village of Belmont in Lafayette county, between Platt and Belmont mounds, two landmarks which are visible for 25 miles in every direction. This park can best be reached by the regular trunk highway from the present village of Belmont.

Northern Forest State Park, located in Vilas county, comprises more than 150,00 acres of woods and waters, in which both game and fish abound. It is here that the State Conservation Commission operates its mammoth tree nursery which every year furnishes millions of evergreens for reforestation programs. Visitors to this park can find wilderness camping or resort hotel facilities according to their liking, and in the scores of lakes they can find fishing unexcelled anywhere in the Middlewest.

Located high on top of Granite mountain, a few miles south of the city of Wausau in Marathon county, is Rib Hill State Park which contains the highest point in Wisconsin. From the highest point in the park, 1940 feet, the visitor is rewarded for his climb by one of the most majestic views to be had anywhere in the state.

Potowatomi is the name of another state park in Door county. It is located on a section of the neck of land between Green Bay and Sturgeon Bay which has long been called Government Bluff. Magnificent vistas of coastline scenery can be seen from the peak of this Government Bluff, as can the whole of Sturgeon Bay and Green Bay.

Terry Andrae State Park on the shore of Lake Michigan in Sheboygan county, perpetuates a bit of the sand dune country to posterity. Botanical experiments have been carried on in this park so that the spot is fascinating to the scientist as well as to the tourist.

American Legion Memorial State Park and Forest Preserve is a co-operative venture in park and forest administration between the state and the American Legion. The legislature of 1929 established this area which contains approximately 36,000 acres as a definitely named state park. Much intensive park development cannot be carried on because of the size of the area. This park will always be available to the lover of nature who wants to rough it and hike or camp in a true bit of the north woods.

The newest of Wisconsin's state parks is Copper Falls, an area of 520 acres near Mellen in Ashland county. It contains a delightful waterfall where the Bad river flows over the Keeweenawan trap before it plunges into a remarkable gorge to form a combination of waterfall and gorge scenery difficult to surpass even in the Rocky Mountains.



Copper Falls. Copper Falls State Park.

DIVISION OF FISHERIES

Introductory

The first state fisheries effort in Wisconsin was the appointment of a fish inspector under Chapter 77 W. S. in 1866. Eight years later state fisheries operations were started under an act of the legislature of 1874 by which a commission was appointed and a small appropriation made.

The first state work of hatching fish was carried on at the Dousman private fish hatchery located near the village of Dousman in Waukesha county. The first state hatchery was established in Madison in 1875 and is still in operation.

Commercial species received attention from the state fish department at almost as early a date as game fishes of inland waters. The second hatchery established in the state was a station for hatching lake trout and whitefish. It was located in Milwaukee. Later this hatchery was transferred to Oshkosh where the lake trout and wall-eyed pike were hatched. The pike work was discontinued at Oshkosh however, because of the unsatisfactory quality of the water in the spring during the hatching season. The lake trout work was continued at the Oshkosh station until the two new commercial fish hatcheries were built at Sheboygan and Sturgeon Bay in 1911.

The third state fish hatchery was built at Bayfield in 1895. It was used primarily for hatching brook and lake trout to take care of the streams in the northern part of the state and the commercial lake trout fishing in Lake Superior.

About this time demand was made that the state make efforts to hatch bass and more wall-eyed pike. This brought an appropriation from the legislature to establish the hatchery at Woodruff in 1901.

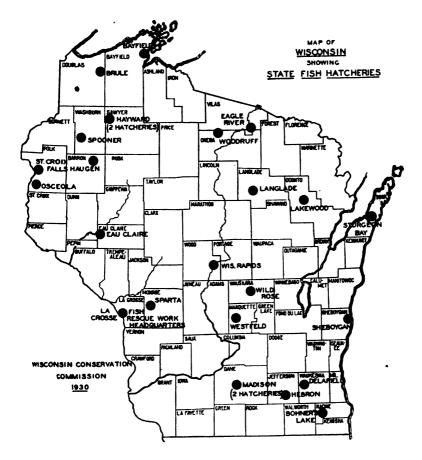
Having a bass hatchery in the northern part of the state brought a demand for one in the southern part of the state and the Delafield hatchery was established in 1907. Next, with the increased need for a larger distribution of brook, brown, and rainbow trout than it was possible to obtain from the Madison and Bayfield hatcheries, the Wild Rose trout hatchery was built in 1908.

Following 1908 interest became keen to increase efforts for the production of commercial species of fish for the Great Lakes. This interest culminated in building the two commercial fish hatcheries at Sturgeon Bay and Sheboygan in 1911. These two hatcheries have been in continuous operation since that time.

A greater need was soon felt for more hatcheries to propagate lake fish. In 1914 a pike hatchery was established at Spooner and

in 1915 a pike hatchery was built at Eagle River and a temporary structure which could be used for hatching pike in the spring, was built in Tenney Park in Madison.

All these hatcheries continued to operate along recognized lines of activity. In 1919 Wisconsin began the program in the Middlewest of rearing fish to a larger size before planting. This necessitated



building hatcheries where there was sufficient water and room to construct rearing ponds or series of raceways in which the fish could be raised to a fingerling size or larger before being planted. The St. Croix Falls hatchery was the first established under this new program. It was built in 1919.

About 1923 the conservation commission thought it advisable to establish several small part time rearing hatcheries where suitable sites and water supplies could be found. In that year hatcheries were built at Westfield, Hayward, and Lakewood. In 1925 to round

out the brook trout propagation and rearing program and at the same time to acquire a large stock of spawners, the commission leased the Troutmere hatchery at Osceola from A. Hansen, the owner. The lease extends for a ten-year period and the state has the option of buying the property at any time for \$40,000.

In 1926 the conservation commission entered into a co-operative program with the Nekoosa-Edwards Paper Company whereby the company constructed a rainbow trout hatchery on their property at Nepco lake near Wisconsin Rapids. This hatchery has been operated by the state.

Two more pike hatcheries and four more trout hatcheries were added by the action of the legislature of 1927. The pike hatcheries were built at Birchwood and Haugen. Both of these hatcheries were built with funds raised by popular subscriptions.

The four trout hatcheries ordered built in 1927 are located at Eau Claire, Brule, Sparta, and at Crystal Springs near Antigo in Langlade county. The city of Eau Claire donated to the state a site for the hatchery in the city park at the headwaters of Little Niagara creek. The Brule hatchery was built by sportsmen's organizations of Douglas county and presented to the state. The Sparta hatchery was located in the old city water works building, the use of which was donated in a 99-year lease by the city. The Langlade county hatchery was built on a site donated to the state by the Langlade County Fish and Game Protective Association.

In 1928 a site for a wall-eyed pike hatchery in Jefferson county was given to the state by George Van Lone and Leon Marshall, near Hebron. This hatchery was built with funds appropriated by the 1925 legislature.

In 1929 a site was finally found and purchased to build a new bass and wall-eyed pike hatchery in the southern part of the state which had been ordered by the legislature of 1927. After a long search, a suitable site was found at the outlet of Bohner's lake in Racine county.

It was found however, that the high price of the land and the rough topography made it impossible to build a hatchery and pond with the available appropriation from the 1927 legislature so an additional appropriation of \$10,000 was granted by the 1929 legislature. A hatchery and an 11 acre bass pond were finished in the fall of 1929 and in operation for the first time in the spring of 1930.

Today Wisconsin has 25 hatcheries which are annually producing more than 300,000,000 fish for distribution and planting in Wisconsin waters. It is mainly due to state fisheries activities that Wisconsin still has a reputation for good fishing despite the constantly increasing demand put upon the lakes and streams of the state by fishermen from Wisconsin and visitors to the state.

Propagation

The general policy of the conservation commission of Wisconsin is to propagate and plant all kinds of native game and food fishes

in the streams and lakes of the state; to rid the lakes and streams of fish which are detrimental to and retard the progress of game fish; and to make the distribution of fish as complete as possible.

The methods employed in the hatcheries of Wisconsin are those which for years have been in use in all fish culture operations. Trout are hatched in long hatching boxes with trays of eggs, one upon the other, with an empty tray on top, and a wedge or brace to hold them in place in the hatching tank. The hatching tanks are arranged to that the water will run from one compartment to another with water going up through the eggs and fish at all times. This is the method employed in handling all kinds of trout.

Wall-eyed pike and all kinds of eggs which are hatched in glass jars are handled in what is known in Wisconsin as the Chase jar. The jars are placed on a framework of wood known as a battery and the water is introduced into the bottom of the jar by means of a rubber hose and galvanized tube, causing the water to pass through all the eggs in the jar before it runs out over the lip at the top of the jar.

Pond culture, or fish work with nest-building warm water fish, such as members of the sunfish family, is carried on in large ponds or lakes. The adult fish are paired off by putting a certain number of males and females in each pond and allowing them to follow their natural methods of nest building and egg laying and hatching. After the young fish are hatched and are large enough, they are taken out of the ponds and planted in lakes and rivers to which they are well adapted.

Hatching Activities and Improvements

1. The Madison trout hatchery is the oldest in the state and is located five miles southwest of the city. Brown and rainbow trout are hatched and raised at this station. Eggs are collected from the large stock of parent fish held for that purpose and hundreds of thousands of both species of trout are distributed from the Madison hatchery each year both to streams for planting and to other hatcheries for rearing.

The property at the Madison hatchery consists of 63 acres of land and 11 buildings. Because of its proximity to the city, the Madison hatchery is a favorite place for picnicking and great crowds of people frequent the grounds every day during the summer. A grove of fine old oak trees and the general topography of the land make it a pleasing park.

Many improvements have been carried on at the Madison hatchery during the biennium. A large open pond at the rear of the hatchery building was filled in and 250 feet of concrete raceway were built across the pond improving the appearance and facilitating the holding of fish. A mile of electric light line was erected, bringing the Madison city service to the hatchery grounds. There were 900 feet of concrete walk built around the hatchery and grounds, and 800 feet of concrete raceway repaired in addition to the 250 feet of new race-

way. Sixteen new rearing troughs were built and the bottoms of several ponds were covered with fresh rock.

2. The Bayfield hatchery is the second oldest hatchery in the state and is located on highway 13 between Ashland and Bayfield on the shore of Chequamegon bay about two miles from Bayfield. At this hatchery both commercial and game fish work is done. Lake, brown, and brook trout are all hatched at this station. The lake trout eggs are gathered from Lake Superior and all fish hatched from them are planted back into the lake. The brown and brook trout are planted throughout the state, most of the brown trout being planted in the southern part of the state in streams which are no longer adaptable to brook trout. All brook and brown trout eggs are collected from stock fish which are raised at the hatchery.

At this hatchery there are 502 acres of land, eight buildings, 40 ponds, 1500 feet of raceway, 6700 feet of pipe line. The following repairs and improvements have been made at this hatchery during the past biennium.

Six new rearing ponds, and the rearing capacity of the hatchery for bringing fish up to fingerling size has been increased from 42 to 94 tanks. The stock fish on the grounds have been increased very materially, four new artesian wells have been drilled, all buildings have been repaired and painted, and the grounds and buildings maintained in their usual excellent condition.

3. The Woodruff hatchery, the third oldest station in the state, is located on highway 47, two and one-half miles southeast of Woodruff. This hatchery is the center of all operations for wall-eyed pike egg collection in the northern part of the state during the spring. All equipment for the work is stored here and all eggs shipped to other pike stations throughout the state are sent out from the Woodruff hatchery.

Wall-eyed pike, black bass, muskellunge, and pickerel are all hatched at the Woodruff hatchery. The muskellunge, pickerel, and pike are hatched in glass jars; black bass in two large rearing ponds and a lake which are on the grounds.

There are also five ponds where a muskellunge rearing experiment has been carried on for several years. The muskellunge fry are put into the ponds soon after the food sac is absorbed, and during their early stages they are fed with small aquatic life gathered from nearby lakes. After 10 to 14 days of feeding on the crustacea they are large enough to take larger food and are supplied with small fish until they are four months old. At this time they vary from six to eight inches in length. This is the age at which they are distributed for planting.

The Woodruff hatchery property comprises 275½ acres of land, seven buildings, seven ponds, one lake, and 2,200 feet of pipe line which conducts the water supply from Carroll lake to the hatchery and ponds. The following improvements were made during the biennium.

A new net house with a cement floor, 30 feet wide, 50 feet long, and 12 feet high was built. All buildings on the grounds were repainted and thoroughly repaired. A lighting plant was installed which furnishes light for the grounds and all buildings.

A new one and one-half ton Ford truck was added to the transportation equipment, and a new pump and engine were installed for use on the grounds and the hatchery. New nets and other equipment including 1,800 net stakes, necessary for pike egg collecting operations, were constructed, and a new steel pipe line was laid from the main water line to the hatchery building to replace the old pipe line which has always given trouble because of the growth of tree roots into it which clogged it up. The new pipe line will eliminate all this trouble in the future.



Woodruff State Fish Hatchery.

4. The Delafield hatchery is located in Waukesha county on highway 30 in the village of Delafield. It is devoted entirely to the hatching of wall-eyed pike and the hatching and rearing of black bass.

The property consists of 32 acres of land, six ponds, an excellent hatching building, 1,430 feet of pipe line. The water supply for the hatchery and ponds is drawn from Nagawicka lake.

5. The Wild Rose hatchery is located one mile north of the village of Wild Rose on highway 22 in Waushara county. It is one of the most beautiful hatcheries in Wisconsin. There are many native trees on the grounds and in 1916 more than 6,000 Scotch and white pines were planted on the hatchery grounds, some of which are now 25 feet in height. Spacious lawns make the hatchery grounds an ideal place for picnics and thousands of people visit the grounds during the summer months.

Brown and rainbow trout are hatched and reared at this hatchery.

All eggs handled at this station are taken from parent fish held in the ponds.

There are 32 ponds, 1,200 feet of pipe line and five buildings. In the last two years all the buildings were painted inside and out and some new roads and walks have been built on the grounds. Several new ponds have been constructed and the ice house, meat house, garage, workshop, and tool house have all been rebuilt. The fish car barn where the Badger No. 2 is stored, is located at Wild Rose. This building has been sealed on the inside, new windows have been installed in it, a new roof has been put on and the entire building has been painted. The old concrete raceway has been rebuilt and concrete floors and approaches have been put in the new buildings.

6. As Sturgeon Bay and Sheboygan hatcheries are identical both in construction and operation, description of one applies to the other. The only difference in the two places is in the water supply. At Sturgeon Bay the water is pumped from the bay by a co-operative arrangement with the city pumping station. At Sheboygan the city water is used.

Living quarters for the hatchery superintendent are provided for on the second floor of each of these hatcheries. They are electrically lighted and steam heated. Each of the hatcheries has a capacity of 2,500 quarts of green eggs and each year the hatcheries are filled to capacity. All the young fish hatched from the eggs are planted in the lakes on the fishing grounds from which the parent fish were taken.

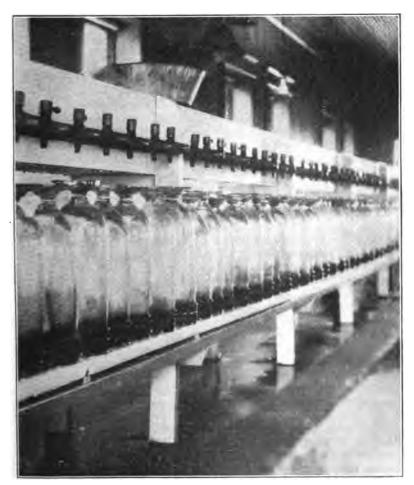
Eggs for propagation work of the two commercial species, lake trout and whitefish, are obtained from commercial fishermen under an agreement with the state whereby the state issues a permit to the fishermen to operate during a portion of the closed season when the fish are spawning. The fishermen under state supervision, collect the eggs and deliver them to the hatcheries. For remuneration the state gives them the fish taken during the spawning operations.

Lake trout egg collection begins after the commission has made tests to determine that the fish are ripe for spawning, and continues until the state orders it closed after a sufficient number of eggs have been taken to fill the hatcheries. Lake trout eggs are incubated during the coldest part of the year and are held in the hatchery after hatching, until the food sac is practically absorbed before distribution.

Wall-eyed Pike Hatcheries

Wall-eyed pike eggs are hatched at 10 hatcheries located at Delafield, Woodruff, Eagle River, Hayward, Birchwood, Haugen, Bohner's lake, Hebron, Spooner, and Tenney Park in Madison. Hatcheries at Bohner's lake, Woodruff, and Delafield carry on propagation work in addition to wall-eyed pike, but activities at each of the others are restricted to pike operations.

By far most of the pike eggs collected in Wisconsin are taken from the inland lakes of the northern part of the state from parent fish which are caught with hoop nets on the shores of the lakes in the spring soon after the ice goes out. The pike is the second of the spring spawning fish to come on to the shores to deposit eggs, the pickerel being the first. At about the same time the pike are spawning, muskellunge spawn, and as the season advances, members of the sunfish family like the bass, crappies, etc., start their spawning activities.



Single hatching battery in a pike hatchery.

The hatcheries which are used exclusively for pike are small buildings, 20 by 50 feet, and are supplied with batteries containing glass jars to hatch the eggs. The capacity of the batteries varies from 100 to 200 jars.

Incubation of wall-eyed pike eggs takes from 10 to 21 days depending upon the temperature of the water and the weather. The

warmer the weather and water, the quicker the hatching takes place. The little fish begin swimming immediately after hatching and follow the current through the jars out into a large tank in which they are held for distribution. They are distributed and planted as soon as possible after hatching.

Each of the 10 pike hatcheries has a capacity of 40,000,000 to 50,000,000 pike. During the biennium each of the pike hatchery buildings has been painted.

7. The St. Croix Falls hatchery is located in Interstate Park within the village limits of St. Croix Falls. Activities at this station were started in 1919 in an old flour mill which was later remodeled into what is probably the most unique fish hatchery building in the world. Each one of the four floors in the building is used for hatching purposes and is made possible because the water supply is obtained from a high hill immediately across the road from the building which gives sufficient fall to bring the water into the fourth floor of the hatchery. This arrangement is inconvenient as it necessitates an excessive amount of stair climbing to feed the fish.

The hatchery at St. Croix Falls is the first place in the state where successful rearing operations for brook and brown trout were carried on. On the brow of the hill across the road from the hatchery building, is a long raceway containing 18 rearing ponds. On the hillside series of raceways have been built in such a way that the water passes from one to another through open ditches and over stones, becoming completely aerated between the ponds. This system is so successful that the same water can be used in 10 rearing ponds on the hillside before it is finally conducted to the river. In addition to the hillside series of raceways, a large rearing house has been built on the same level as the hatchery building and the water is conveyed to this building in the same way it is taken to the hatchery.

The property of the St. Croix Falls hatchery includes the hatchery building, two residence buildings, one rearing house, one hatching house, and 28 concrete ponds and raceways. During the biennium the buildings have all been painted, both on the inside and outside, the two residences remodeled, and the grounds have been made into lawns.

Eight-inch tile water mains have been laid 12 feet deep for 935 feet of line, and 750 feet of galvanized pipe was laid to conduct a water supply to the ponds. Concrete sidewalks have been built around the residences, and retaining walls have been built on the brow of the hill and around the back of the hatchery above the river. Old wooden sills were replaced with concrete sills in the main building, one new gas engine was installed, and 160 feet of new water main were laid under the ground to conduct a better quality of water into the hatchery building.

8. The Westfield hatchery is located at Westfield, two blocks west of highway 51. The propagation of brook and brown trout at this hatchery has been very successful. The water is secured from

artesian wells varying in depth from 65 to 225 feet. The temperature of the water never changes more than one degree and its supply seems inexhaustible.

The property of the Westfield hatchery, nine and one-half acres of land, consists of four buildings, 20 rearing ponds built in raceways, and a superintendent's home. The five acres of land on which the buildings are located, are cleared of trees, but there is a grove on the other four and one-half acres which can be ultimately used for additional series of raceways.

9. The trout hatchery at Hayward was established in 1923 and is located about three miles from the city of Hayward on Highway 77. The land and water rights were donated to the state by Robert Peigh and the Hayward Rod and Gun Club. There is also a wall-eyed pike hatchery at Hayward which is owned by the county and operated by the state.

The Hayward trout hatchery is operated part time every year in rearing brook trout. The supply of trout for the Hayward hatchery is sent from the larger trout hatcheries in the state when their ponds become overcrowded as the fish grow.

The property of the Hayward hatchery consists of 34 acres of land including a right of way to the hatchery from highway 77, a large reservoir for water supply, hatchery building, rearing building, ice house, and four rearing ponds.

10. The entire property of the Osceola hatchery has been leased from A. Hansen of Osceola, for state brook trout propagation activities. Approximately half of the water supply is obtained from artesian wells insuring a constancy of temperature. The balance of the water is taken from a stream which flows through the grounds.

At the lower end of the hatchery grounds a dam has been built across the stream to develop waterpower for generating electric current to light the buildings and grounds and furnish power for grinding the fish food and pumping water needed in rearing ponds.

At another level, another dam has been built creating a pond 350 feet long, 150 feet wide and 20 feet deep below which a large rearing house has been constructed 110 feet long, 30 feet wide which is supplied with water from the pond. This rearing house holds 90 troughs each of which is 18 inches wide, 14 inches deep, and 14 feet long.

By the time the artesian water from the hatchery reaches this reservoir which is nearly a mile from its source, it is warmed up enough to enhance the growth of the trout. Brook trout prefer water not warmer than 65 degrees and grow faster in the water at approximately that temperature.

The property of the Osceola hatchery consists of 230 acres of land, three houses, an old hotel building, a hatching house, a rearing house and five other buildings. In addition there are several thousand feet of raceway and ponds for holding adult trout from which eggs are taken for hatching purposes.

11. The Wisconsin Rapids hatchery is used only for raising rainbow trout, and is located about three miles from Wisconsin Rapids in

Wood county on Nepco lake. The buildings and grounds are owned by the Nekoosa-Edwards Paper Company.

When the paper company built Nepco lake to procure a pure water supply for the paper mill, it was proposed to them by the Wisconsin Conservation Commission that they establish a fish hatchery as a means of stocking the lake. It was agreed that the commission would furnish the fish and operate the hatchery and as remuneration for the use of the building, one-half of the fish raised were to be planted in Nepco lake.

This hatchery was established in 1926 and used as a rainbow trout hatchery since that time under this agreement.

- 12. The Eau Claire hatchery is a brook trout hatchery located in one of the parks of the city of Eau Claire and was built from a legislative appropriation in 1927. The water supply which is excellent, is secured from two wells. Most of the fish raised at the Eau Claire hatchery are planted locally and applicants usually call for the fish at the hatchery, saving the expense of railroad distribution. Equipment includes besides the hatchery building, 32 rearing troughs with a capacity of 1,000,000 trout.
- 13. The Sparta hatchery, since its establishment in the old city water works building in Sparta, has been in operation each year hatching brook and brown trout and rearing them to a large fingerling size. Most of the fish from this hatchery are planted locally and are called for at the hatchery.
- 14. The Brule brook trout hatchery is located in Brule State Park about one mile south of the village of Brule on county trunk H in Douglas county. Water is secured from a pond above a dam built across the Little Brule river.

The expense of the construction of the dam and hatchery was borne by sportsmen's organizations of Douglas county, and when completed the site was presented to the conservation commission. There are five rearing ponds in the Brule hatchery, and brook trout have been raised to fingerling size each year since the station was established in 1927.

15. Propagation efforts for wall-eyed pike, bass, and other sunfish, are carried on at the Bohner's lake hatchery which is located three miles south of Burlington at the outlet of Bohner's lake from which the water supply is secured.

This hatchery was put in operation for the first time in the spring of 1930 and bass were raised very successfully from the stock of parent fish in the 11 acre pond which was built between the hatchery building and the lake by building a dirt dike 1,400 feet long. A large percentage of the bass hatched was retained in the pond during the summer and allowed to grow to fingerling size before being distributed.

The property at Bohner's lake hatchery was acquired during the biennium and a hatchery building with living quarters on the second floor for the superintendent was built during the winter of 1929–1930. In addition to the hatchery building and the pond there are several

small rearing ponds constructed of concrete. Artesian wells supply the water for these ponds.

16. The Langlade county hatchery is located on county trunk A, 14 miles from Antigo on land donated to the state by Charles W. Fish. A dam has been constructed across the overflow from Crystal Springs, the headwaters of the eastern Eau Claire river, creating a reservoir pond to supply water for the hatchery. Brook trout are hatched and reared for distribution in Langlade and nearby counties, at this hatchery.

The Langlade county hatchery was built in 1928 and the entire property includes the hatchery building, four rearing ponds and a garage.



One of the new specially constructed trucks used in fish distribution.

Distribution

Distribution of fish from hatchery to lakes and streams, or to rearing ponds, begins in Wisconsin in the early spring as soon as the wall-eyed pike eggs begin to hatch. Pike are the first fish to be distributed because they are the first to hatch and must be planted as soon as possible after hatching. The food sac on infant wall-eyed pike is quickly absorbed and if the fish are to survive, they must be planted before the sac is completely absorbed.

Just before the beginning of the biennium the division of fisheries designed a new type of fish distribution truck of which two are now in use. Each truck has a capacity of 100 cans of fish so that one trip from a hatchery to the railroad by the two trucks will transport 200 cans, the maximum capacity of the fish car. Each of the trucks is supplied with a special air compressing unit with pipe lines running lengthwise across the body of the truck so that an air line can be placed in each can. This aeration prevents loss of fish during transportation.

The commission owns one railroad fish car, the Badger No. 2, which is inadequate to distribute the entire output of the hatcheries. The

Chicago and Northwestern Railroad loans to the state each summer two steel baggage cars which are transformed into fish distribution cars with aeration systems similar to the one in the Badger No. 2.

The Badger No. 2 is put in operation early in the spring and is kept in operation until all the distribution work is done late in the fall. As soon as pike distribution is finished, the car is used to transfer fish rescued from various places in the state other than the Mississippi river, to points for planting. Trout distribution begins immediately following the distribution of the rescued fish and continues until late in the fall.

In August when the extensive fish rescue activities are started in the Mississippi river bottoms, one of the three distribution cars is kept busy constantly distributing these rescued fish. Distribution of 20 months old trout which are reared at several of the hatcheries, is the last work of the fish cars each fall. The element of timeliness is vital in the distribution of these adult trout as when planted they are almost ready to spawn and must reach the streams before spawning begins.

State Rearing Activities

The commission has expanded its policy of rearing to a larger size all fish which can be reared prior to distribution. In addition to carrying on rearing activities with the species, principally trout, about which much is known, the commission has also conducted rearing experiments with other species hitherto considered impossible to rear. Among these latter are wall-eyed pike and muskellunge.

Many new rearing ponds have been built at the trout hatcheries, and distribution of adult brook and brown trout has assumed larger proportions than ever before. During the first year of the biennium more than 46,000 adult trout were distributed and planted in streams selected after a state wide survey had been made. The second year this number was practically doubled and the fish were distributed according to the same plan. These adult trout are large enough to spawn when planted and large enough to catch the following season.

Co-operative Rearing Program

The commission made a definite appeal to sportsmen's groups and interested individuals throughout the state to co-operate with the state department in the rearing of trout. Prior to the opening of the biennium there were very few privately owned and operated rearing ponds toward which the commission was acting in an advisory and co-operative way. In the spring of 1929 a letter was sent from the commission to the secretary of each sportsmen's group, offering to furnish plans and suggestions for the building of rearing ponds, and to make inspection of available sites.

A similar letter was sent during the second year to the groups which had not responded the first year. At the close of the two-year period there were 184 privately owned and operated rearing ponds located in 75 places in the state. The fisheries division co-

operated with them all, and furnished 3,068,205 trout to them during the biennium.

Both brook and brown trout are distributed from state hatcheries early in the spring to these co-operative rearing ponds, the brook trout being sent to the central and northern portions of the state, and the brown trout to the southern part. It is understood by the



One series or raceway of rearing ponds at the Westfield trout hatchery.

sportsmen's groups or individuals operating the rearing ponds, that when the fish are to be planted, some representative of the state fisheries division will be present to report on the success of the rearing experiment.

Mississippi Rescue Activities

One of the most interesting and vitally important phases of the fisheries program in Wisconsin is the rescue work carried on in the river bottoms every summer and fall when receding water in the river leaves hundreds of landlocked pools and lakes throughout the

bottoms. These landlocked bodies of water gradually dry up during the dry periods of the summer and fall, and millions of fish would perish if it were not for the rescue work carried on by the fisheries departments of Wisconsin, Minnesota, Iowa, and the federal government.

The river bottoms of the Mississippi are divided into territories to be worked by the fisheries departments of the several states and the federal government so that there will be no duplication of effort. The methods of rescue are similar for each division. Crews consisting of five men each with boats, nets, tubs, and other equipment to rescue stranded fish, seine all bodies of water in the river bottoms which are not connected with the main channel. Practically all of the fish rescued—more than 95 per cent—are returned immediately to the main channel of the river. The balance is taken in live boats to the Mississippi river conservation headquarters at La Crosse. Here the fish are held in tanks until a railroad carload is obtained when they are shipped out for distribution to inland lakes and rivers.

By far most of the fish rescued from the sloughs are small. Parent fish which go into the sloughs early in the spring to spawn, leave the spawning pools immediately when the water begins to foul. The small fish are not large enough to leave the sloughs before the waters become landlocked. It is very seldom that adult fish are found in landlocked pools.

An interesting phenomenon noticed by rescue men is that each year some one species is found in preponderance and that seldom is the same species found in preponderance two years in succession. Many species are found including pickerel, bass, catfish, bullheads, and carp.

Other Rescue Work

The fisheries division also carries on rescue work at other places in the state. Below the dam across the Fox river at Neenah extensive rescue operations save thousands of white bass and perch each year. These fish collect in the eddies formed by the wheels of the paper mills at Neenah. The small bass go over the dam early in life and remain in the water below the dam. When they grow to a fingerling size and begin swimming against the current, they congregate in large numbers immediately below the wheels of the mills.

The congregation of large numbers of fish makes it possible for rescue crews to take them out in large quantities. As many as 3,000,000 of these fish have been rescued from below the dam in one year, and planted back in Lake Winnebago. When the numbers warrant it, a small distribution of white bass rescued here is made throughout the state and very good results have been obtained in many waters where these fish have been planted.

A new rescue activity was begun during the biennium in flowages above power dams on some northern rivers. These flowages which do not have constant levels, frequently cause the death of thousands of fish which become stranded around the edges of the flowage when

the water is lowered. As many as 6,000 adult fish, including six species, were rescued from one flowage where the water had been backed up over what was once a wooded country. These fish were all planted in lakes in the immediate vicinity of the flowage.

Fish Refuges

A well-rounded fisheries program includes protection of fish in their natural reproduction as well as production of fish in hatcheries. To carry out the protection of natural reproduction the commission established a large number of fish refuges in desirable places throughout the state on known spawning and rearing grounds.

Refuges are established in both streams and lakes. The great majority of stream refuges are for the protection of trout in spawning grounds and places in which the infant fish stay until they are large enough to venture into the main streams. Trout refuges are always established in small feeder creeks to trout streams. Trout refuges continue in effect throughout the year.

Another reason for the establishment of fish refuges in streams and rivers is to protect fish in places where they congregate due to artificial impediments in the stream. Under certain dams where there are no fishways, or inadequate fishways, large numbers of fish congregate and stay for long periods of time, an easy prey to either legal or illegal means of fishing. Closing such areas does much to protect these fish in unnatural gathering places. Such refuges also continue in effect throughout the year.

The third kind of fish refuges are those established in lakes on known spawning grounds of lake fish, notably bass. Such refuges are necessary as bass usually spawn in June during the open season for other kinds of lake fish. Setting aside certain areas as refuges on known spawning grounds protects these late spawners from undue disturbance and results in a greater efficiency in natural reproduction. Such refuges are seasonal, extending until July 1 each year.

Removal of Rough Fish

. A complete fisheries program includes artificial propagation; rearing; protection of natural spawning and rearing grounds; and the regulation or removal from the waters of foreign substances injurious to the fish, and of undesirable rough fish. The conservation commission for many years has authorized by contract the removal of rough fish, principally carp and buffalo, from inland lakes, and for the past two or more bienniums there has been an annual appropriation for the removal of all kinds of rough fish from Winnebago waters.

During the biennium the commission has taken another step in the removal of injurious fish and by special appropriation, is removing undesirable rough fish from the northern lakes. This work is carried on during the spring at the time when suckers and other rough fish are spawning.

Stream and Lake Survey

To compile statistical information which will assist in the scientific distribution of fish, the commission during the biennium, has made

a stream and lake survey of all the waters in the state. All the information compiled has been arranged in a card index, each lake or stream listed on a separate card.

This survey constitutes the most accurate checking of the inland waters of the state that has ever been made, and the information compiled during the survey will prove of increasing importance in years to come. The following is a sample of the information listed for lakes. Cards for the stream survey are very similar.

LAKE SURVEY

	Fish rec
County Section	. Township Range
Nearest station	Distance
Nearest state highway	Distance
Nearest county highway	Distance
Name of outlet	Tributary to
Pollution	
Nearest dam	
Vegetation	Abundance
Small fish for food	
Bottom (mud, sand or gravel)	
Character shore line	
Current Country	(rolling or flat)
Private or public	Length
Greatest depth Average de	pth Average width
Species fish (present)	Abundance
Species fish (past)	Abundance
Kinds planted	
When	Results
Investigator	AddressDate
Condition of roads	
Recommended for refuge	
Accommodations for how many gue	ests
•••••	

POLLUTION

Stream and lake pollution is a problem to which an increasing amount of attention in recent years has been paid by every one interested in conservation of fish resources. The State Board of Health has direct control of the solution of pollution problems in Wisconsin waters. The conservation commission co-operates with the State Board of Health in all possible ways and is represented on the state committee on water pollution.

COMMERCIAL FISHING

There are two types of commercial fishing supervised by the conservation commission, the Great Lakes commercial fishing for food fish, and the inland waters and Mississippi river commercial fishing for food and rough fishes. The Great Lakes, Green Bay, and Mississippi river commercial fishing is carried on under license granted by the conservation commission. The commercial fishing for carp, buffalo, and other rough fish in inland waters, is conducted under con-

tract by private fishermen and under direct supervision of a supervising warden.

The state operates three hatcheries at which commercial species of fish are hatched for planting in the Great Lakes. These are located at Sheboygan, Sturgeon Bay, and Bayfield. It is interesting to note that although most species of commercial fish caught in Lake Michi-



Crystal Springs State Fish Hatchery, Langlade county.

gan have been decreasing alarmingly, the catches of lake trout—the species to which most attention is paid at the hatcheries—have remained practically the same during the past decade.

The inland lakes' commercial operations are important from both the food and financial standpoints. Hundreds of tons of carp and buffalo are removed each year, all of which are consumed as food in eastern cities. Prices which the private fishermen receive for their catches of carp and buffalo vary from eight cents to 15 cents per pound of which the state receives 25 per cent.

Exchange of Breeding Stock

In order that the high strain of Wisconsin brook trout may be retained, the commission several years ago established the policy of exchanging eggs with different states to develop a new and stronger species. Each year Wisconsin exchanges millions of hatchery eggs for wild brook trout eggs taken from fish caught in streams of Canada and Montana. Eggs received in exchange are of an excellent quality and produce strong, healthy fish.

Scientific Studies

During the biennium the fisheries division has encouraged and cooperated in scientific studies and investigation concerning several phases of the fisheries program. These include projects in co-operation with the state committee on water pollution, the natural history division of the Wisconsin Geological and Natural History Survey, the University of Wisconsin, the State Department of Agriculture and Markets, and with the federal bureau of fisheries.

These studies include a number of subjects. The study being conducted by the state committee on water pollution is an attempt to determine the toxic or poisonous effect on fish life of various types and concentrations of industrial wastes.

The study being conducted by the Wisconsin Geological and Natural History Survey, concerns the fish foods produced in lakes in various parts of the state. These studies deal with the physical and chemical factors which affect the production of this food material, as well as with the amount produced.

One important scientific discovery was made by University of Wisconsin men at the Madison hatchery. This concerned a goitrous condition occurring in trout, and proved that proper use of certain iodine solutions was an effective treatment.

The land economic inventory conducted co-operatively by the State Department of Agriculture and Markets and the commission, is yielding much valuable information which will affect the planting of fish in the future. This inventory is locating all lakes by section, town, and range, and classifying them according to original outlets, channels, shorelines, depth, and hardness of water. In addition, fish scales are collected to aid in determining the relative growth of fish in different waters which indicates the amount of available food and the general suitability of waters for certain species of fish.

The Wisconsin Conservation Commission, in co-operation with the United States Bureau of Fisheries, the Department of Conservation of the State of Michigan, and several fish net and twine companies, is conducting an extensive investigation of chub fishing in Lake Michigan to determine what size mesh should be employed by commercial fishermen in Lake Michigan waters. Data are also being accumulated on the biology of the various species taken in the nets, especially chubs and lake trout, and on the factors involved in the distribution of these species.

BIENNIAL REPORT

DISTRIBUTION BY HATCHERIES-1929

Hatchery	Quantity From Each Hatchery	Total Number From Each Hatchery:	
Madison Brown Trout Fingerling Brown Trout Yearling Brown Trout 2 yr. old Brown Trout Adult	123,000 18,600 50 12	141,662	
Bayfield	828,000 1,765,000	8,445,000	
Wild Rose	5,857,000		
Brook Trout Yearling 5,414 Brook Trout Adult 292	5,706	651,446	
Brown Trout Fingerling 640,800 Brown Trout Adult 420	640,720		
Rainbow Trout Fingerling 4,900 Rainbow Trout Yearling 85 Rainbow Trout 2 yr. old 35	5,020		
St. Croix Falis Brook Trout Fingerling 3,284,000 Brook Trout Yearling 19,040	. 8,808,040	8,498,100	
Brown Trout Fingerling	195,060	<u> </u>	
Brook Trout Fingerling 809,700 Brook Trout Yearling 22,050 Brook Trout Adult 65	881,815	1,021,395	
Brown Trout Fingerling	189,500 80		
Westfield Brook Trout Fingerling Brown Trout Fingerling	241,000 202,000	448,000	
Wisconsin Rapids Rainbow Trout Fingerling	40,000	40,000	
Brule Brook Trout Fingerling rescued Brown Trout Fingerling rescued Rainbow Trout Fingerling rescued	582 94 206	882	
Eau Claire Brook Trout Fingerling. Brown Trout Fingerling.	205,200 296,200	501,400	
Sparta Brook Trout Fingerling Brown Trout Fingerling	288,750 144,600	883,350	
Hayward Brook Trout Fingerling. Wall Eyed Pike Fry	198,500 4 9,155,000	198,500 49,155,000	
Tenney Park Wall Eyed Pike Fry	15,595,200	15,595,200	
Minocqua Wall Eyed Pike Fry		52,240,348	
Black Bass Fingerling	51,726,600 189,520		
Muskellunge Fry. 318,600 Muskellunge Large. 528 Pickerel. 528	814,128 60,000 100		

DISTRIBUTION BY HATCHERIES-1929-Continued

Hatchery	Quantity From Each Hatchery	Total Numbe From Each Hatchery:
Dela field Wall Eyed Pike Fry	48,972,950	49,004,987
Black Bass Yearling 75 Black Bass Adults 12	15,987	
Roach Sundah	15,500 500	
Sagle River Wall Eyed Pike Fry	31,921,000	81,921,000
Spooner Wall Eyed Pike Fry	20,248,450	20,248,450
Birchwood Wall Eyed Pike Fry	23,700,350	28,700,350
faugen Wall Eyed Pike Fry	20,995,200	20,995,200
lebron Wall Eyed Pike Fry	26,241,750	26,241,750
Sturgeon Bay Lake Trout Fry White Fish Fry	12,950,000 800,000	13,760,000
Sheboygan Lake Trout Fry	11,000,000	11,000,000
Gilis Landing Pickerel Fingerling	20,726	20,726
Mississippi River Rescue Station Black Bass Fingerling distributed Miscellaneous Fish Fingerling distributed Miscellaneous Fish returned to river	50,000 399,800 12,155,748	12,605,048
Neenah White Bass Fingerling Perch Fingerling Black Bass Fingerling Pike Fingerling	359,000 672,350 100 250	1,031.700
Mercer Flowage Bass Adults Pickerel Adults Crappies Adults Pick Adults Music Adults Music Adults	124 34 4,491 664 589	5,902
Total		342,840,346

FISH TRANSFERRED TO OTHER HATCHERIES

Wisconsin Rapids sent Wild Rose Rainbow Trout Fingerling	20,000	

FISH EGGS SHIPPED TO OTHER HATCHERIES-1929

Madison Brown Trout Eggs. Rainbow Trout Eggs.	1,400,000 972,000	For hatching In exchange for brook trout eggs
Wild Rose Brown Trout Eggs Rainbow Trout Eggs	1,020,000 1,921,800	For hatching In exchange for brook

DISTRIBUTION BY HATCHERIES-1929-Continued

Hatchery	Quantity From Each Hatchery	Total Number From Each Hatchery:
t. Croix Falls Brook Trout Eggs.	100,000	In exchange for rainbow trout eggs for stock fish at Wild Rose
Brook Trout Eggs.	2,584,800	for Hatching
Total	7,948,600	
ish from Federal Fisheries delivered by State Fish Cars 1929 Miscellanous Fish		67,705
DISTRIBUTION BY HATCHE	RIES-1930	
Bayfield Hatchery Brook Trout Fingerling	1,845,000 600,500	9,698,500
	7,758,000	
Birchwood Hatchery Wall Byed Pike Fry	25,200,000	25,200,000
Brook Trout Fingerling 180,000 Brook Trout Yearling 505	180,505	180,741
Brown Trout Yearling Rainbow Trout Yearling	58 188	
Burlington Wall Eyed Pike Fry Black Bass Fry 197,200 Rlack Rass Fingerling 40,210	85,200,000 238,010	85,441,182
Black Bass Fingerling 40,810 Pickerel Fingerling 500 Deerbrook	8,122	
Brook Trout Fingerling	124,250	124,250
Deiafield Wall Eyed Pike Fry Black Bass Fry 197,500	80,000,000	80,246,225
Black Bass Fingerling	281,175 15,000 50	
Eegle River Wall Eyed Pike Fry	35,100,000	85,100,000
Eau Claire Brook Trout Fingerling Brown Trout Fingerling	566,628 160,500	727,128
Haugen Wall Eyed Pike Fry	15,800,000	15,800,000
Hayward Wall Eyed Pike Fry Brook Trout Fingerling.	27,450,000 22,800	27,472,800
Hebron Wall Eyed Pike Fry	24,150,000	24,150,000
Madison 200,000 Brown Trout Fingerling 200,000 Brown Trout Yearling and 8 mos. 6,600 Brown Trout Yearling 500 Brown Trout 2 yr. old 50 Brown Trout Adults 20		216,795
	207,170	
Brook Trout 20 mos. old	9,525	I itized by GOO

DISTRIBUTION BY HATCHERIES-1930-Continued

Hatchery	Quantity From Each Hatchery	Total Number From Each Hatchery:
Osceola		
Brook Trout Fingerling	i	855,147
Brook Trout Tearning	661,547	
Brown Trout Fingerling	198,600	
St. Croix Falls		İ
Brook Trout Fingerling 797,650		819,300
Brook Trout Yearling 14,400 Brown Trout Fingerling 14,400	812,050 7,250	
Brown Trout Fingering	7,250	
Sheboygan Lake Trout Fry	10,800,000	10,800,000
Sparta		
Brook Trout Fingerling	370,000 217,700	587,700
Brown Trout Fingerling	217,700	
Spooner Wall Eyed Pike Fry	21,150,000	21,150,000
Sturdeon Ray		
Sturgeon Bay Wall Eyed Pike Fry	12,375,000	26,375,000
Lake Trout Fry	14,000,000	
Tenney Park Wall Eyed Pike Fry	15,810,000	15,810,000
Westfield	1	
Brook Trout Fingerling	1	
Brook Trout Yearling	824,935	
Brown Trout Fingerling	297,575	622,510
Wild Rose		015 540
Brook Trout Yearling	10,200	215,549
Brown Trout Yearling		
Brown Trout Fingerling 203,600 Brown Trout Yearling 60 Brown Trout 2 yr. old 25 Brown Trout Adult 850	004 505	
Brown Trout Adult	204,585	
Rainbow Trout Yearling		
Rainbow Trout Adult	764	
Mixed fish	50	j
Wisconsin Rapids		
Rainbow Trout Fingerling	20,400	20,400
Woodruff		
Wall Eyed Pike Fry Balck Bass Fingerling Muskellunge Fry 710,000	41,400,000	42,595,388
Balck Bass Fingerling	65,700	1
Munkellunke Finkerlink	ļ	
Muskellunge Adult 11	711,168	
Pickerel Fry	860,000	l
Pickerel FryBlue Gills Adult	3,025	1
Perch Fry	55,500	ì
Mississippi River Rescued Fish	ļ	
Rlack Bass	175,770	12,122,323
Miscellaneous fish distributed 199, 180 Miscellaneous fish returned to river 11,747,878		
	11,946,558	1
Neenah		
White Bass	1,282,190	2,044,885
Perch	812,695	_,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Crystal Lake		
Miscellaneous.	15,200	15,200
	I	I
Webers' Lake		1

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DISTRIBUTION BY HATCHERIES—1930—Continued

Hatchery	Quantity From Each Hatchery	Total Number From Each Hatchery:
Mud Lake Miscellaneous fish	2,867	2,867
Lakes at Madison Perch transferred	30,209	30,209
Delta Fur Farm Sloughs Miscellaneous Fish	558,408	558,408
Downsville Slough Miscellaneous fish	18,250	18,250
Heafford Junction Miscellaneous fish	54,250	54,250
Moon Lake Crappies transferred	3,000	8,000
Total		838,552,865
Fish from Federal Fisheries delivered by State Fish Cars 1930 Miscellaneous fish		197,200

ROUGH FISHING OPERATIONS JANUARY, 1929, TO DECEMBER, 1929

Removal of Rough Fish From Northern Waters

April to May	Forest Lake	10,937 15,514 147,000 9,513 4,800 8,286
April to May April to May	Stone Lake	
April to May	Lac Vieux Desert	
April to May	Shawano Lake	1,076
Sept. 21 to Oct. 12	Flowage at Mercer	1,916
		226,213

226,213 suckers at 8 lbs. per fish-678,639 lbs.

Removal of Rough Fish From Winnebago District-1929

	Law- yers	Suckers	Gar- fish	Sheeps- head	Dog- fish	Carp	Total No.	Total Lbs.
Jan Feb	5,689	252	828	8	84		6,306	18,918
Mar June	2,006	248 559	15	250 5,185	i	₁₀ -	2,504 5,778	7,122 17,319
July August	9 19	1,021 1,104	21 40	7,428 8,749	20 58	49 108	8,548 10,078	25,644 30,219
Sept Oct	459 1,487	755 889	85 84	5,884 8,480	150 81	72 17	7,805 5,988	21,915 17,964
Nov Dec	1,230 5,898	158 734	784	405 15	14 44	. 4	1,811 7,429	5, 488 22, 2 87
Total							55,787	166,821

Grand total number of pounds of rough fish removed.....

845.460

ROUGH FISHING OPERATIONS JANUARY, 1930, TO NOVEMBER, 1930

Removal of Rough Fish From Northern Waters

		No. of Carp	No. of Suckers	No. of Garfish
April and May	Pelican Lake Big St. Germaine Lake Butternut Lake Stella and Found Lakee Pum Lake Metonga Lake Madeline and Arbor Vitae Lakes Forest Lake Pine Lake		11,975 28,525 16,863 11,795 1,756 56,290 851 24,495	
April 20—30 April 20—28	Rusk Lake Lost Lake Lake of the Falls Tomahawk Lake Franklin Lake Lac Vieux Desert Rest Lake Weber's Pond		31,006 22,450 62,255	
May 80—June 24 October 4 November 15	Long Lake near New Auburn Crystal Lake Brueckbauer's Pond		316,244	785

320,279 fish at 3 lb. per fish-960,837 lbs.

Removal of Rough Fish From Winnebago District-1930

	Law- yers	Suck- ers	Gar- fish	Sheeps- head	Dog- fish	Carp	Total No. of Fish	Total Lbs. of Fish
JanFebJuneJulyAugSeptOct.	5,525 888 8 10 99 1,198	616 141 1,089 1,136 1,534 1,229 1,380	384 236 62 89 58 119 20	11 1 22,363 16,018 80,466 11,187 4,080	53 23 8 55 51 124 69	7 8 81 77 109 158 112	6,546 787 28,511 17,833 83,228 12,866 6,809	19,638 2,211 70,533 51,999 99,684 88,598 20,427
Total							101,030	808,090

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1,298,227

STATE ROUGH FISH CREW

Rough Fish Removal

	Carp	Lbs. Fish
West Bend Pond Barton Pond Deiavan Lake	766 566 8,484	2,300 1,700 25,300
	9,766	29,800

Inter-Hatchery Shipments-1930

Grand Total number of pounds of rough fish removed.....

FISH

Bayfield hatchery Sent Brule hatchery Sent Deerbrook hatchery Sent Hayward hatchery	200,000	brook trout fingerlings brook trout fingerlings brook trout fingerlings
Madison hatchery Sent Wisconsin Rapids	25,000	rainbow trout fry
Osceola hatchery Sent Hayward hatchery Sent Wild Rose Hatchery		brook trout fingerlings brown trout fingerlings
Westfield hatchery Sent Madison hatchery Sent Wild Rose hatchery		brook trout yearlings brook trout yearlings
Wild Rose hatchery Sent Wisconsin Rapids	60,000	rainbow trout

	EG	GS . *
Madison Brown trout eggs1	,110,000	for hatching at Westfield, Sparta and Eau Claire
Rainbow trout eggs	882,000	in exchange for brook trout eggs for St. Croix Falls and Osceola
Brown trout eggs Rainbow trout eggs Rainbow trout eggs	80.000	for hatching at Osceola for hatching at Wisconsin Rapids in exchange for brook trout eggs for St. Croix Falls and Osceola
Osceola Brook trout eggs8	3,458,028	for hatching at St. Croix Falls

SHIPMENTS TO REARING PONDS 1930

Barron. 10,000 20,00 Berlin. 12,00 Berlin. 12,0 Berlin. 12,0 Boscobel. 12,0 Boscobel. 12,0 Boscobel. 12,0 Boscobel. 12,0 Boscobel. 12,0 Briggsville. 4,500	Town	Brook Trout	Brown Trout
Altoona. 12,500 Argyle	Algoma	10.500	
Argyle		12,500	
Barron. 10,000 20,0 Berlin. 12,0 Berlin. 12,0 Berlin. 12,0 Berlin. 12,0 Boscobel. 12,0 Boscobel. 12,0 Boscobel. 12,0 Boscobel. 12,0 Boscobel. 12,0 Boscobel. 12,0 Boscobel. 12,0 Boscobel. 12,0 Boscobel. 15,000 22,6 Circlotx. 15,000 22,6 Circlotx. 15,000 22,6 Circlotx. 15,000 22,6 Circlotx. 16,000 22,6 Circlotx. 16,000 Circlotx. 18,0 Eagle River. 5,000 Eagle River. 5,000 Eagle River. 36,000 Eagle River.			20,000
Belott	Argyle		10,000
Berlin 12,0	Barron	10,000	
Soyd	Detoit		20,000
Soyd			14,000
Boyd	Boscobel		12.000
Chippewa Falls	Boyd	7,500	1
Chippewa Falls	Briggsville	4,500	
Cryster 10,000 22,60 2	Chippewa Falls	15,000	1
Darien 10,0 10,0 18,0	Crivita.		22,690
Durand	Derion	10,000	10 000
Eagle River			18,000
Eau Claire	Eagle River	5.000	10,000
Elmwood	Eau Claire	86.000	
Femininore	Elmwood		22,500
Femininore	Elroy		4,000
Femininore		21,875	25,000
Hatley			40,000
Hatley	Gilmenton		22 500
Hatley	Green Bay		2.000
La Parge	Hatley	12.000	1
La Parge	lump River	10,000	
La Parge	Kilbourn	9,000	8,000
Lancaster	Adysmith	80,000	
Laona 28,500	A Farge		20,000
Lime Ridge 7,00 Luxemburg 7,500 Manatowoc 14,00 Marathon 9,000 Mineral Point 22,500 Mondovi 22,50 Montore 20,00 Montfort 25,00 Montfort 25,00 New Holstein 6,00 New Holstein 7,50 New Holstein 7,50 New Holstein 10,000 Dahkosh 12,0 Pardeeville 5,250 Plain 10,00 Platteville 50,00 Plymouth 12,00 Redgranite 12,00 Richland Center 12,00 Richland Center 12,00 River Falls 9,000 Schofield 9,000 Sparta 4,700 Spring Valley 25,00 Stanley 7,500 Formah 7,500 Formah 7,500 Formah 7,500 Formah 7,500 Formah 7,500 <		98 500	20,000
Luxemburg 7,500 14,00		20,000	7,000
Manitowoc 14,00 Marathon 9,000 Menomonie 22,500 Mineral Point 22,500 Mondovi 22,500 Montfort 20,00 Muscoda 12,00 Needah 6,00 New Holstein 7,50 New London 10,000 Dahkosh 5,250 Plateville 50,00 Platreville 50,00 Plymouth 12,00 Portage 14,625 Richland Center 12,00 Silver Falls 25,00 Schofield 9,000 Sparta 4,700 Spring Valley 25,00 Staverse Point 8,500 Sturgeon Bay 10,000 Comah 7,500 Comah 7,500 Comahawk 10,000 Cwalterio 25,00 Wautenba 20,00 Wautenba 20,00 Wautenba 8,40 Wautenba 8,60 Wautenba 8,00 <	Luxemburg	7,500	l
Menomonie 22,500 Mineral Point 9,6 Mondovi 22,50 Montfort 22,0 Museoda 12,00 Neesdah 6,0 New Holstein 7,50 New London 10,000 Palkosh 5,250 Platin 10,000 Platin 12,00 Portage 14,625 Redgranite 12,00 Richland Center 12,00 Richland Center 12,00 Richland Center 12,00 Schofield 9,000 Sparta 4,700 Spring Valley 25,00 Staverse Point 8,500 Sturgeon Bay 10,000 Comah 7,500 Comahawk 10,000 Yalley 25,00 Wautenia 8,00 Wautenia 20,00 Wautenia 8,00 Wautenia 8,00 Wautenia 8,00 Wautenia 8,00 Wautenia 8,00 Wa	Manitowoc		14,000
Mineral Point. 9.66 Monroe. 22,50 Montfort. 26,00 Muscoda 12,00 Needshoro. 12,00 New Holstein 7,55 New London 10,000 Dahkosh 12,00 Pardeeville 5,250 Plain 10,00 Platteville 50,00 Plymouth 12,00 Sortage 14,625 Redgranite 19,00 Richland Center 12,00 Siver Falls 25,00 Schofield 9,000 Spring Valley 25,00 Stevens Point 8,500 stevens Point 8,500 sturgeon Bay 10,000 Comah 7,500 Comahawk 10,000 Comahawk 10,000 Cow Rivers 14,00 Vaulesha 20,00 Wautoma 8,00 Wautoma 8,00 Wisconsin Veteran's Home, Waupaca 7,500 Wittenberg 7,500		9,000	
Mondovi 22,50 Monroe 25,00 Muscoda 12,00 Neesdah 6,00 New Holstein 7,50 New London 10,000 Pardeeville 5,250 Platin 10,000 Platin 12,00 Platin 12,00 Portage 14,625 Redgranite 12,00 Richiand Center 12,00 Richiand Center 12,00 Silver Falls 9,000 Schofield 9,000 Sparta 4,700 Sparta 4,700 Stanley 7,500 Stevens Point 8,500 Stevens Point 8,500 Stevens Point 8,500 Stevens Point 10,000 Fulley 4,000 Walley 25,00 Wateros 10,000 Wateros 25,00 Wateros 3,000 Wateros 3,000 Wateros 3,000 Wateros 3,000 Water	Menomonie	22,500	
Montfort 25,00 Musecoda 12.06 Necedah 6.00 New Holstein 7,55 New London 10,000 Dahkosh 12,00 Pardeeville 5,250 Platin 50,00 Plymouth 12,00 Portage 14,625 Redgranite 12,00 River Falls 25,00 Schofield 9,000 Sparta 4,700 Spring Valley 25,00 Stevens Point 8,500 Stevens Point 8,500 Stevens Point 8,500 Stevens Point 10,000 Comah 7,500 Comah 7,500 Comah 7,500 Comah 7,500 Comahawk 10,000 Low Rivers 14,00 Vaulesha 25,00 Wausen 8,00 Wausen 8,00 Wausen 8,00 Wittenberg 7,500	Mineral Point		9,600
Montfort 25,00 Museods 12.06 Needshoro 12.06 New Holstein 7,550 New London 10,000 Dahkosh 12,00 Pardeeville 5,250 Plain 50,00 Plymouth 12,00 Portage 14,625 Redgranite 12,00 River Falls 25,00 Schofield 9,000 Sparta 4,700 Spring Valley 25,00 Stevens Point 8,500 stevens Point 8,500 stevens Point 8,500 stevens Point 10,000 Tomah 7,500 Fomah 7,500 Fomah 10,000 Valley 25,00 Waterloo 25,00 Waukesha 20,00 Wausou 6,000 Wausou 6,000 Wautoma 8,000 Witcenberg 7,500			20,000
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Neeshkoro	Muscoda		19 000
New Holstein 10,000 12,0	Necedah		6.000
New London 10,000 bahkosh 12,00 Pardeeville 5,250 Platin 10,000 Parteville 50,00 Plymouth 12,00 Portage 14,625 Redgranite 19,00 Sicher Falls 9,000 Schofield 9,000 Sparta 4,700 Spring Valley 25,00 staverse Point 8,500 sturgeon Bay 10,000 Comah 7,500 Comahawk 10,000 Comahawk 10,000 Falley 25,00 Waterioo 25,00 Wautenba 20,00 Wautenba 25,00 Wautoma 8,40 Wautoma 8,00 Wittenberg 7,500 Toologo 16,00 Wittenberg 7,500	Neshkoro		12,500
Dahkosh	New Holstein		7,500
Pardeeville 5,250 10,00 10,00 10,00 10,00 10,00 12,00	New London	10,000	19 000
Plain 10,00 Platteville 50,00 Plymouth 12,00 Portage 14,625 Redgranite 19,00 Richland Center 12,00 Silver Falls 25,00 Schofield 9,000 Sparta 4,700 Sparta 7,500 Stanley 7,500 Stevens Point 8,500 Sturgeon Bay 10,000 Comah 7,500 Comahawk 10,000 Cwo Rivers 14,00 Vailey 4,00 Waterloo 25,00 Waukenba 20,00 Waukenba 20,00 Wausau 6,000 Wausau 6,000 Wautoma 8,40 Wautoma 8,00 Witcenberg 7,500		5.250	12,000
Platteville	Plain		10,000
Portage 14,625 Redgranite 19,00 Richiand Center 12,00 River Falls 25,00 Schofield 9,000 Sparta 4,700 Spring Valley 25,00 Steanley 7,500 Stevens Point 8,500 Sturgeon Bay 10,000 Fomah 7,500 Fomah 7,500 Comahawk 10,000 Fow Rivers 14,00 Valley 4,00 Waterloo 25,00 Waukesha 20,00 Wausau 6,000 Wausau 6,000 Wautoma 8,000 Wittenberg 7,500			50,000
Redgranite. 19,00 Richland Center. 12,00 River Falls. 25,00 Schofield 9,000 Spring Valley 25,00 Stanley. 7,500 Stevens Point 8,500 Sturgeon Bay 10,000 Fomah 7,500 Fomahawk 10,000 Fow Rivers. 14,00 Valley. 4,00 Waterloo 25,00 Waukesha 20,00 Wautoma 8,40 Wautoma 8,000 Witconsin Veteran's Home, Waupaca 16,00 Wittenberg 7,500			12,000
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Schofield	Kedgranite.		19,000
Schofield	Siver Falls		25,000
Spring Valley 22,00	lchofield	9.000	20,000
Spring Valley 22,00	Sparta	4.700	
Stanley	Spring Valley		25,000
Comah 7,500 Comahawk 10,000 Lwo Rivers 14,00 Alley 4,00 Waterloo 25,00 Waukesha 20,00 Waupun 8,46 Wausau 6,000 Wautoma 8,000 Wisconsin Veteran's Home, Waupaca 16,00 Wittenberg 7,500	Stanley	7,500	
Comah 7,500 Comahawk 10,000 Lwo Rivers 14,00 Alley 4,00 Waterloo 25,00 Waukesha 20,00 Waupun 8,46 Wausau 6,000 Wautoma 8,000 Wisconsin Veteran's Home, Waupaca 16,00 Wittenberg 7,500		8,500	
Ivo Rivers 14,00 Valley 4,00 Waterloo 25,00 Waukesha 20,00 Wauyun 8,40 Wausau 6,000 Wautoma 8,000 Wisconsin Veteran's Home, Waupaca 16,00 Wittenberg 7,500	Sturgeon Bay	10,000	
Ivo Rivers 14,00 Valley 4,00 Waterloo 25,00 Waukesha 20,00 Wauyun 8,40 Wausau 6,000 Wautoma 8,000 Wisconsin Veteran's Home, Waupaca 16,00 Wittenberg 7,500		10,000	
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Waupun 8,46 Wausau 6,000 6,00 Wautoma 8,000 16,00 Wisconsin Veteran's Home, Waupaca 16,00 Wittenberg 7,500	Allev		4,000
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Waupun 8,46 Wausau 6,000 6,00 Wautoma 8,000 16,00 Wisconsin Veteran's Home, Waupaca 16,00 Wittenberg 7,500	Waukesha		20,000
Wausau 6,000 6,000 Wautoma 8,000 16,000 Visconsin Veteran's Home, Waupaca 16,000 Wittenberg 7,500	Waupun		8.400
Wisconsin Veteran's Home, Waupaca		6,000	6 000
Wittenberg 7,500		8,000	16,000
	visconsin veteran's Home, Waupaca		10,000
T VV4 T III V	Voodville	7,500	25,000
, i i i i i i i i i i i i i i i i i i i	T UUU TIII		20,000

Fish allotted entirely upon adequacy of ponds.

DIVISION OF GAME

Introductory

The great need of an intensive game management program for Wisconsin, barely begun during the past biennium, is readily apparent to all who have seen the rapid and unfavorable changes which have come to Wisconsin game birds and animals in recent years. The unfavorable changes of game cover and food conditions, the indiscriminate draining of marsh areas, the motor car and the consequent flocking of hunters to the last stands of already seriously depleted game areas, general overshooting, the lack of strategically placed refuges, tardy restocking, the need of winter feeding, unknown game diseases, modern arms and ammunition, the unfavorable balance of predators to game in certain areas, the purchasing and leasing by private individuals and groups of some of the state's finest remaining shooting grounds, the ever-increasing posting of lands and farms, and the new and increasing generation of hunters, all bear directly on the problem of Wisconsin's future game management program.

The scope of the work is great. It includes the education of the public in the rapidly changing game conditions of the state, together with respect for the law enforcement policies which are in effect for the continuation and propagation of our game birds and animals. It includes also restoration of suitable cover and natural foods in the highly developed agricultural sections of the state, and the restoration of cover and food in many other sections. Restoration of marsh areas is important. An annual inventory of the game crop of the state by counties, and a sportsman's individual kill report and questionnaire covering the game crop taken annually, is badly needed.

A proper survey of the value of existing refuges, and recommendations for additional game and wild life refuges, both for upland game birds and animals and for migratory birds are essential. Much thought and money must be expended in keeping migratory waterfowl in Wisconsin during the breeding season and for longer periods in the fall of the year. An investigation as to the necessity of planting duck foods, and establishing resting and feeding grounds for waterfowl will be necessary. Investigation and research of game bird diseases are imperative if the stock of native game birds, and in some cases native game animals, is to be maintained scientifically. Much additional information is needed to maintain the proper balance between predators and game. Money and organization will be needed for a comprehensive plan of winter feeding.

Tardy restocking has caused sportsmen to congest during open seasons in the few remaining game covers where there is a normal

game crop. This may be partly corrected by wide distribution of foreign game birds, such as pheasants and partridge, throughout every available area in the state so that such congestion will no longer be necessary.

Much thought and time, and eventually much money, must be expended to counteract the present policy of individuals and organizations purchasing or leasing Wisconsin's finest hunting grounds for private shooting. The fast increasing posting of lands and farms, and the knowledge that the average sportsman's actual shooting grounds are becoming more confined and limited year by year, presents a major problem. It will require the co-operation of sportsmen throughout the state if the farmer and land owner are to be interested in bringing back to Wisconsin the fine hunting grounds it should have by right of its natural topography and climate.

Much has been accomplished in the past two years. It is merely a beginning, however, and there is need for much thought and work on the problems for the future. Among the major accomplishments of the conservation commission in the game management program from the time of its beginning May 15, 1928, to the close of the biennium June 30, 1930, are:

- 1. Establishment of a game division headed by a superintendent of game.
- Establishment and organization of a state game farm with a maximum yearly output of 10,000 ring-neck pheasants and 1,000 miscellaneous game birds.
- 3. Establishment in connection with the state game farm of a native game bird and animal zoo.
- Organization of experimental stations at the state game farm which include experimental projects on deer, wild turkey, sharptailed grouse, and Hungarian partridge.
- 5. The stocking of 12,000 ring-neck pheasants in suitable propagation areas throughout the state.
- 6. The distribution of 22,000 ring-neck pheasant eggs to co-operators throughout the state.
- 7. The stocking of 70 pairs of imported Hungarian partridge.
- 8. The experimental stocking of approximately 125 wild American turkeys.
- 9. The restocking of beaver to suitable localities.
- A partial survey of the wild life refuge system with recommendations for a more efficient program.
- 11. A complete game survey of the state through the appointment of state game observers in each county.
- 12. The establishment of 30 permanent winter feeding stations for ground feeding upland game birds.
- 13. Establishment of laws requiring game bird and deer farm licenses.
- 14. A partial survey of a proposed waterfowl refuge system.
- 15. The publication and distribution of educational bulletins on the hatching and rearing of game birds, on winter feeding, and miscellaneous subjects.

Game Farm

The state game farm, located in Peninsula State Park, Door county, consists of 93 acres which are in actual use for game farm purposes. Housing facilities include a residence for the game farm manager; a building used as temporary quarters for employees; one combination hatching, equipment, and feed house; and one building used as a storage feed house.

There are two large pheasant rearing fields, one of approximately 16 acres and one of about 26 acres, a white-tailed deer and wild turkey field comprising about 16 acres, a sharp-tailed grouse experi-



State Game Farm. View shows sections of hatching field, winter pen, and rearing field planted to corn.

mental field of seven acres, a Hungarian partridge experimental field of eight acres, an emergency rearing field of seven acres, and a winter holding pen of eight acres. Two hundred stationary breeding pens cover an additional four acres of ground. The farm is completely equipped for the annual breeding, hatching and rearing of 8,000 to 10,000 ring-neck pheasants, with the necessary equipment for an additional output of 1,000 miscellaneous birds.

Beginning with a few pens of ring-neck pheasants in the fall of 1928, 284 ring-neck pheasant hens and 54 ring-neck pheasant cocks were reared or purchased and were used as breeders during the 1929 breeding season. In 1929, 9,907 eggs were produced and 4,000 of these were shipped to co-operators. From the remainder of the eggs produced at the farm together with additional eggs purchased, 2,650

birds were reared, and there was a total distribution of 1,791 birds to co-operators in the fall of 1929.

Approximately 850 ring-neck pheasant hens and 20 ring-neck pheasant cocks were retained or purchased for the 1930 breeding season. With a particularly fine record in 1930, 39,700 pheasant eggs were produced at the farm. Of these eggs, 17,500 were shipped to cooperators. Records from 15,435 of these eggs set by co-operators show that 8,124 were hatched and 5,138 birds were reared to eight weeks of age or less. At the state game farm 20,750 eggs were set, using 1,330 setting hens. Twenty men were employed at the game farm during the height of the rearing and shipping season. Fertility records were unusually high, averaging a little better than 96 per cent.

Approximately 10,000 birds were reared to nine weeks of age, 9,200 of which were shipped to co-operators. There are 1,200 birds being retained for use as breeders at the farm for the 1931 breeding season There were in addition 115 wild turkeys distributed in the Baraboo hills country.

As an example of the drawing power that a game farm has for predatory animals and birds, it is of interest to note the following list of vermin which were trapped at the game farm during the short time it has been in existence:

Great horned owls	35	Skunks	26
Barred owls	15	Woodchucks	511
Sharp-shinned hawks	24	Cats	20
Cooper's hawks	18	Mink	9
Crows	91	Rats	11
Coyotes	1	Weasels	43
Foxes	14	Mice	428

Game Surveys

The first annual survey by counties of Wisconsin game was completed in February 1930, the results of which are listed in the table beginning on page 95. Through efficient and trained game observers, principally conservation wardens and carefully selected sportsmen in each county, this annual count of Wisconsin's game birds and animals will be of increased practical value.

Refuges

There is a total of 397,611 acres of land set aside in Wisconsin for wild life and game refuge purposes. Of this total, 52 private wild life refuges comprise 52,197 acres. Wisconsin private wild life refuges are of unusual size, averaging slightly over 1,000 acres each. Of the 147,456 acres in state game refuges, the largest is the Forest county refuge of 46,080 acres. Sixteen state parks, which by statute are state game refuges, total 197,957 acres, the largest of which is Northern Forest Park in Vilas county which comprises approximately 150,000 acres of land. (See map for detailed location and refuge information.)

Zoning of State With Species Adapted for Each Locality

For the purposes of efficient game administration, Wisconsin has been divided into four principal game districts (see map on page 88).

The general characteristics of the northern district, including 22 counties, are: moderate to little agricultural development with lumbering still an important industry, and with some forestry being practiced. There are many thousands of lakes and streams of various sizes and depths. Industrial development is slow. The region offers opportunities for exceptional recreational development.

The principal game birds and animals of the northern district include: white tailed deer, varying hare (snowshoe rabbit), ruffed grouse, sharp-tailed grouse, and prairie chickens. Black bear, brush wolves, red and grey foxes, beaver, raccoon, skunk, mink, muskrats, cottontail rabbits, and squirrels are fairly plentiful in many sections. Many of the lakes and rivers offer excellent wild duck and goose hunting up to November 1.

The general characteristics of the southwestern district, of 17 counties, include fair agricultural development with an almost entire absence of swamps, marshes and lakes, except along river courses. Industrial development is slow. In many parts of Iowa, Grant, and Lafayette counties there exists what may be termed as a "game desert" where cover and food are so deficient as to exclude game birds and animals in numbers sufficient for hunting. Wooded ravines and ridges occur in the upper two-thirds of the district.

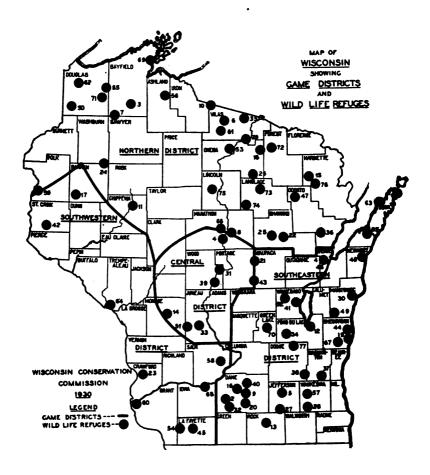
Ruffed grouse, ring-neck pheasants, bobwhite quail, cottontail rabbits and squirrels are the most common varieties of game in the southwestern district. There are few deer and beaver. Foxes, raccoon, skunks, mink, and muskrat are fairly plentiful in isolated areas. Wild ducks and geese are fairly abundant along the river bottoms. There is a sprinkling of sharp-tailed grouse, prairie chicken, and woodcock.

The central district of six counties has moderate agricultural development in some sections, but with little or no development in the abandoned drainage districts. Marsh, brush, and grass areas are extensive, but generally not wet enough to be attractive to waterfowl. There are large areas of second growth jackpine and scrub oak. The few lakes are isolated. Local industrial development is not widespread through this section. Sharp-tailed grouse, prairie chicken, ruffed grouse, cottontail rabbits, and white-tailed deer are the most common of the game birds and animals. Brush wolves, red and grey foxes, beaver, and otter are more or less common. Raccoon, skunk, mink, muskrats, and squirrels are plentiful in some sections. There is an occasional covey of quail and woodcock seen along the drainage ditches and creek bottoms. Wild ducks are plentiful in but few localities.

The southeastern district of 26 counties, has high agricultural development. There are numerous scattered areas of from half an acre to several thousand acres of open marsh and tamarack swamps. Lakes are numerous, ranging from deep, weedless lakes, such as Green Lake in Green Lake county to shallow, weedy lakes such as

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Puckaway lake, also in Green Lake county, and of all sizes from ponds to Lake Winnebago. Desirable game cover and food is insufficient largely due to over grazing. Industrial development is high, with a consequent intensive hunting within driving distance of most cities. The southeastern section is particularly adapted to the English ring-neck pheasant and Hungarian partridge. Cottontail rabbits are plentiful in some counties. Squirrels are plentiful in but isolated sections. It is here in the southeastern district that Wisconsin sportsmen get their best wild duck and goose hunting. Snipe, plover, rail, and rice hens are abundant in many localities. Foxes, raccoon, skunk, mink, and muskrat are common in some counties.



WILD LIFE REFUGES AND PRIVATE GAME REFUGES

	Name	County	Acres
	Hotz Refuge	Door	2.20
	Vernon Valley Refuge	Dane	1.6
3.	Lake Owen Wild Life Refuge	Bayfield	1.0
	Mosinee Refuge	Marathon.	7,8
	Astalan Refuge	Jefferson.	19
3.	National Playground Association	Vilas	1.5
	Sawyer County Refuge	Sawyer	1,3
	Izaak Walton Game Preserve	Marathon	8
:			
	Lake Wingra Wild Life Refuge	Dane	. 5
).	Constance Lake Reserve	Vilas	1,1
•	Park Island Game Refuge	Chippewa	2
2.	Taycheedah Wild Life Refuge	Fond du Lac	2,0
3.	Overcrest Refuge	Rock	9
١.	Valley Farm Refuge	Monroe	8
i.	Silver Cliff Refuge	Marinette	2
3.	University Bay Wild Life Refuge	Dane	4
ï.	Mesenbring Ranch	Barron	9
3.	Ferndale Place	Oneida	ĭ
í.	Forest Preserve Refuge		2.1
j.		Sheboygan	
	Foxhall Wild Life Refuge	Dane	2
Į.	New Hope Iola Wild Life Refuge	Waupaca and Portage	8
2.	Marquardt Wild Life Refuge	Shawano	5
3.	Stoehr's Reserve	Crawford	2
١.	Lakedale Reserve	Washburn	1
5.	Seneca Wild Life Refuge	Shawano	3
6.	Kraftwood Refuge	Langlade	2
7.	Duell Acres	Jefferson.	8
B.	Red Brae Farms	Waukesha	5
9.	Otter Rapids Wild Life Refuge	Vilas	. 2
Ď.	Manitowoc Co. Fish and Game Ass'n.	Manitowoc	5
ĭ.	Lake Biron Wild Life Refuge	Wood	1.6
2	Harker Wild Life Refuge.		
8.	Determen Wild I if Defense	Dane	4
	Peterson Wild Life Refuge	Juneau	1
4.	Randall Wild Life Refuge	Fond du Lac	2,2
5	Forest Lake Wild Life Refuge	Vilas	1,1
6.	Morgan Wild Life Refuge	Oconto	6
7.	Camp Minikani Wild Life Refuge	Washington	1
8.	McDonald Wild Life Refuge	Dodge	8
9.	Tri-City Wild Life Refuge	Wood	8.5
0.	Mendota State and Memorial Hospital	Dane	5
1.	Northern Hospital Wild Life Refuge.	Winnebago	6
2.	St. Croix Reserve No. 1	St. Croix	š
3.	I. W. L. Chain O' Lakes Chapter No. 200	Portage and Waupaca	1.1
4 .	Kohler Game Refuge	Sheboygan	2,2
5.	Lafayette County Wild Life Refuge		2,2
ő.	Oneide Cell and Diding Club	Lafayette	
7.	Oneida Golf and Riding Club	Brown	. 3
	Archibald Wild Life Refuge	Oconto	8,4
8.	Krohn's Lake Wild Life Refuge	Kewaunee	1,6
9.	Manitowoc Co. Fish and Game No. 2	Manitowoc	_ 7
0.	Tamarack Farm	Douglas	8,8
1.	Elroy Gun Club Refuge.	Juneau	2,4
2.	Winchester Wild Life Refuge	Winnebago	- 8
	•	1	
	Total acres	1	52,1

STATE PARKS

	Name	County	Acres
58. 54.	American Legion		
55.	Brule		
6.	Copper Falls.		
7.	Cushing		
8.	Devils Lake		
9.	Interstate		
0.	Nelson Dewey	Grant	
1.	Northern Forest		
2. 3.	PattisonPeninsula		
3. 4.	Perrot		
5.	Potowatomi		
6.	Rib Hill		
7.	Terry Andrae	Sheboygan	115
8.	Tower Hill	Iowa	
	Total acres		197,957

STATE WILD LIFE REFUGES

Name		County	Acres
69. 70. 71. 72. 73. 74. 75. 76.	Bayfield County Black Hawk Refuge Douglas County Forest County Langlade County No. 1 Langlade County No. 2 Lincoln County Marinette County Horicon Marsh	Douglas Forest Langlade Langlade	650 47 24.960 46,080 10,880 14.080 7,680 3.080 40,000
	Total acres		147.457
	Grand Total		397,611

Experiments in Propagation and Planting

Experiments in the propagation and planting of game birds and animals during the biennium have necessarily been limited because of a lack of specific information in regard to the best planting areas, the lack of time in which to make proper research, and the lack of necessary funds. When it is considered that prior to the present biennium there were no experiments with either the propagation or planting of game birds or animals, much has been accomplished during the two years past. Experiments with pheasant propagation and other game birds at the game farm, using both artificial and natural methods, have proved conclusively that up to the present time the natural method of hatching and rearing pheasants for stocking purposes is much more satisfactory from the rearing and economical standpoint than the hatching, brooding, and rearing of these birds by artificial means. Many difficult problems have been encountered in the artificial rearing of pheasants. There is no doubt but that

eventually artificial methods will be practicable, but much experimental work will be necessary to make them so.

With Hungarian partridge the natural propagation method only has been used in a single experiment. Six pairs of partridge were placed in an eight acre field which provided sufficient cover and nesting sites, and they were undisturbed during the breeding and rearing season. Approximately 35 young birds were reared in this experiment, the majority of which have been trapped and brailed. Inasmuch as the propagation of Hungarian partridge in captivity is extremely difficult results were gratifying.



Ring-neck pheasant cocks. State Game Farm.

Natural propagation methods only have been also applied to experiments with sharp-tailed grouse. Six pairs of birds were placed in a seven acre field with sufficient cover and food. Fifty per cent of the breeding birds were either killed by predators or by flying into the wire fence. Two small broods were reared, one of four and one of three birds. This success is encouraging and indicates that with proper methods the propagation of sharp-tails in captivity is feasible, at least from an experimental standpoint.

An experiment with wild American turkeys was conducted solely along natural lines, with the birds being allowed to lay and hatch their eggs under natural conditions in the 16 acre combination deer and wild turkey field. Approximately 75 young birds were reared in this field. There was practically no loss. In the event of future plantings of wild turkeys by the state, sufficient stock can easily be reared at the game farm under this system at a comparatively small cost and with but little effort.

Approximately 60 grey mallard ducks were reared by setting hens or by allowing the ducks to hatch their own eggs and rear their young. Because of lack of water and nesting facilities, and because of the impracticability of stocking any migratory game birds at this time, it is deemed advisable to discontinue further migratory bird experiments in the immediate future.

For the greater part, efforts in stocking pheasants have been concentrated in the southeastern and southwestern districts, and approximately 500 birds have been stocked in the northern and central districts for experimental purposes in considering the advisability of



Close-up of Bald American Eagle screaming in the State Game Farm Zoo.

future stocking in these sections. Particular observations will be made as to the adaptability of pheasants to so-called prairie chicken country, and to the relation of the pheasant to the prairie chicken and sharp-tailed grouse in this country.

Seventy pairs of Hungarian partridges were stocked in the southeastern and southwestern sections in the spring of 1930. Much research work is necessary with respect to the proper planting of partridge.

Approximately 115 wild turkeys have been stocked in a centralized experimental planting in the vicinity of the village of Poynette in the Baraboo hills region. There have been gratifying reports on the success of the experiment to date, inasmuch as several turkey

hens have hatched and reared broods of young, and about 100 young turkeys have been counted by observers.

Thirty grey mallard duck hens have been shipped to the Moon Lake refuge from the state game farm, to be brailed and liberated by the Izaak Walton League. No information is available on these birds at this time.

Private Game Farms

From January 1, 1930 to July 1, 1930, 58 game bird farm licenses were issued by the game division. The farms vary in size from half an acre to about 20 acres. Game birds licensed at the issuance of



Native Wisconsin Wildcat. State Game Farm Zoo.

these licenses included 1,641 ring-neck and other game pheasants, 113 ornamental pheasants, 132 quail, 483 wild ducks, 216 wild geese, 14 Hungarian partridges, and 55 wild turkeys. The birds registered were principally for breeding, and the yearly production of these farms is many times the total. It can be conservatively estimated that 15,000 game birds were reared on licensed game bird farms in Wisconsin in the period from April 1 to July 1, 1930.

Private Deer Farms

There are at present 10 licensed deer farms in Wisconsin. A total of 72 deer were registered at the time of issuing the licenses. The farms vary in size from the smallest of four acres to a farm near Shawano which contains 800 acres.

Private Fur Farms

Fur farms have been established in Wisconsin since 1923. There were but five licenses issued in that year. In 1924 the licenses increased to 78, in 1925 to 157, in 1926 to 332, in 1927 to 661, in 1928 to 1,198, in 1929 to 1,735, and in 1930 to 2,230. Several hundred licenses have been cancelled since they were issued, but at the present time there are approximately 500 licensed muskrat fur farms, 61 beaver fur farms, and 1,050 combination fur farms which include the breeding of otter, fisher, marten, skunk, mink, and raccoon. largest fur farms are located in Waupaca and Winnebago counties, with the exception of one exceptionally large muskrat farm, consisting of 5,380 acres in Trempealeau county on which there were estimated to be 5,000 muskrats at the time the license was issued in 1929. The largest beaver fur farm is located at Stevens Point. Here there are 32 beaver kept in pens for experimental purposes. During 1928 and 1929 there were approximately 75,000 muskrats, 400 raccoon, 350 mink, 700 skunk, and 350 beaver pelted on licensed fur farms, for which the value received was about \$130,000.00.

Game Farm Zoo

The state game farm zoo, exhibiting only native game animals and birds of Wisconsin, has proved to be most interesting and educational to game farm visitors. Included in the list of birds and animals exhibited are: bald eagles, great horned owls, barred owls, red-tailed hawks, rough-legged hawks, Cooper's hawks, sharp-shinned hawks, sparrow hawks, white-tailed deer, black bear, brush wolves, wildcats, red foxes, grey foxes, badgers, raccoon, mink, weasels, snowshoe hares, cottontail rabbits, mallard ducks, black ducks, and wood ducks.

The approximate number of visitors during the 1930 season totalled 17,500. On July 4, 1930 it is estimated that 2,000 people visited the farm. The number of visitors on a Sunday averaged 200.

Fur Farm Investigation

During the biennium the investigation of applications for fur farms was assumed by the division of game. Three kinds of fur farm licenses are provided for by the statutes for (1) muskrat, (2) beaver, and (3) general, which include raccoon, mink, marten, fisher, otter, and skunk.

Before licenses can be issued for muskrat and beaver farms, an investigation must be made of the lands covered by the application, and the number of animals living on the land must be estimated. These animals are sold to the applicant by the commission.

A field investigator carries on this checking work and also gives advice on fur farm matters. His duties include besides the investigation of new applications, the checking of established fur farms, and the sales and shipments of fur.

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GAME POPULATION—1929—Continued

S. T. G. —Sharp-talled grouse (prairie chick P. G. —Phased grouse (prairie chick P. G. —Ruffled grouse (partridge) P. G. —Ruffled grouse (partridge) G. —Goall H. Hungarian partridge G. —Shownhoe rabbit G. R. —Storwhoe rabbit G. R. —Squirrel

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DIVISION OF LAW ENFORCEMENT

Introductory

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From the earliest traditions of human history it has been held that man had the right to reduce wild animals, fish and fowl to his possession and that by so reducing them to his possession, they became his absolute property.

In the records from ancient countries, from the old Roman law in particular, we find that authorities have always held that wild animals belong to no one in particular while wild, and that he who first reduces them to possession becomes their absolute owner even though such wild animals are found and taken on property belonging to another.

Since modern, orderly governments came into existence, this ancient idea has been modified somewhat. Ownership of all things wild by nature has come to rest in the state, and it is recognized today that such wild animals, birds and fish are subject to regulations of some governmental power. Modern opinion still holds that all things wild by nature become the property of him who first reduces them to possession, but modern laws specify the means by which wild animals can be taken into possession.

Regulatory laws regarding wild animals, birds, and fish have been a part of the common codes in European countries for many centuries. But in America it was not until wild game became perilously near the point of extermination that governmental powers began to be concerned about its care. When the danger of extermination made itself apparent, America did its best to legislate the conservation of all wild things in a hurried, impulsive way.

As a consequence, each of the 48 states and the several territories developed codes of game laws of varying effectiveness. Since the first attempts at the creation of codes of game laws, about the middle of the last century, there have been constant changes. Science is gradually replacing sentiment, and as a result, game laws are being based more and more upon facts which are discovered through research and investigation.

When states established codes of game laws it became necessary to have law enforcement groups to enforce them. The creation of these forces for law enforcement created a new type of officer—the game warden.

The necessity for enforcement officers in the United States was keener than in other countries. In European countries, although perhaps the actual ownership of the birds, fish and animals may not have been vested in the property owner, he did have and still does have, a very definite voice in prescribing how and when the game

could be taken. This gave him a direct and personal interest in the game. Because the taking of the game represented a possible source of income for him, the property owner was anxious to protect it. Hence, public officers were not as important as they might have been in Europe.

In the United States the title to all things wild by nature rests wholly in the state, and the state and only the state, has the power to specify how, by whom, and when things wild by nature can be reduced to personal possession. This theory operates regardless of the property owner upon whose land the wild game lives, and it also extends to the fish in a stream flowing over a property owner's land. This theory tended to preclude direct and personal interest in the protection of game by individuals, and developed the necessity of public officers.

History of Law Enforcement

Wisconsin began a game protection program about the same time, relatively, that older states did. The first law, April 12, 1887, created offices for four game wardens whose annual salary was \$600. The first paragraph of this law follows:

"It shall be the duty of the governor, upon the passage of this act, to appoint four persons to be known as game wardens, whose duty it shall be to secure the enforcement of all statutes of this state for the preservation of fish and game; to bring or cause to be brought actions and proceedings in the name of the state of Wisconsin to recover any and all fines and penalties, and to punish all violations of said statutes. Such game wardens shall hold their office for the term of two years from the date of such appointment and until their successors shall be appointed and qualified, and any vacancy during such term shall be filled by the governor. Such game wardens may appoint one or more deputies for each county, who shall have all the authority of the game wardens except as herein otherwise provided. Such deputies shall receive no salary but shall be entitled to the same fees as constables now receive in criminal cases for like services and paid in like manner. Such deputies may be removed at any time and their places filled by the game warden who appointed them."

Two days later, April 14, 1887, Governor Lucius Fairchild signed an act which provided for the appointment of three persons, citizens of the state, as fish wardens. Their duties were primarily the supervision of the commercial fishing on the Great Lakes.

In 1891 the offices of fish wardens and of game wardens were abolished and in their stead was created the office of state fish and game warden. His term lasted for two years. The state fish and game warden had the power to appoint one or more deputies in each county. Deputies did not receive any salary, but did receive fees. All sheriffs, deputy sheriffs, coroners, and police officers, including constables, were declared to be ex officio deputy fish and game wardens.

This type of administration continued for many years. An interesting addition to the duties of deputy wardens, and one which is rather indicative of a change and combination to come later, is that in 1898

all deputy fish and game wardens were declared to be deputy fire wardens.

During the 24 years in which the state fish and game warden department existed, changes of administration brought changes in the state fish and game warden office. Laws were added and modified with each session of the legislature, and the scope of the department kept increasing constantly. The conservation of the state's game and fish



resources grew and developed commensurately with the conservation of other natural resources in the state.

In 1915 the several state departments concerned with the conservation of natural resources were combined into a state conservation commission. These included the state fish and game warden department, the state board of forestry, the state park board, and the fisheries commission. This conservation commission was composed of three executive officers under whose supervision the various conservation activities were carried on. During the period immediately preceding and following 1915 there were great advances made in the law enforcement phase of conservation. With the formation of the new conservation commission, all field men were notified that political activity would no longer be the measure of their tenure in office. This was an important step toward replacing efficiency for expediency in the selection of officers.

The selection of game wardens in Wisconsin has been on the basis of competitive examination since the first civil service law was passed in 1905. Following the combination of the game warden department with the other conservation departments, the examinations were made more stringent and comprehensive. The civil service method of employing men became the only method.

It was during the time of the first combined conservation commission that the title of the law enforcement officers in the field was changed from "deputy game warden" to "deputy conservation warden"—a change in name indicative of a change of idea. The name adopted in 1915 is still used.

In 1923 the three man commission was changed to a one man commissioner form, which continued until 1927. Under the one man type the state was divided into six districts, and a district conservation warden was put in charge of each, supervising the work of the deputy wardens in the district. Each of the district wardens was responsible directly to the conservation commissioner.

But this form of administration was unwieldly and in 1925 the conservation commissioner appointed a chief conservation warden as a superior officer over all district wardens and deputies, and responsible to the commissioner. This form was retained when the present six man commission was created in 1927, except that the offices of district wardens were abolished. With the single change of title of the head of the division from chief conservation warden to superintendent of law enforcement in 1929, this form still continues.

Importance of Conservation Law Enforcement

It is impossible to estimate the value of Wisconsin's resources of fish, game, and fur. The game fish of the inland waters play a leading part in attracting to Wisconsin the millions of tourists who in 1929 spent more than \$134,000,000 in this state. The commercial fishing of the Great Lakes and the Mississippi provides an income for thousands of citizens. The sale of furs taken annually in Wisconsin by hunters and trappers assumes great proportions as does the food value of all the game and fish which is used by those who get it.

These monetary values are tremendous but they do not represent the total value of the state's wild life resources. There is an aesthetic value that cannot be reckoned in dollars and cents but that is none the less real.

There are just two ways by which Wisconsin may be assured a continuance in increased numbers of these wild life resources, either of which is likely to fail if not supplemented by the other. These two are protection and production—protection of what now exists as

well as that which is to be produced; and production to answer the ever increasing demands for more game and fish.

Looked at in this way conservation law enforcement assumes tremendous significance. But there is still another reason that adds to this significance. The financial success of the conservation program in Wisconsin is due largely to the vigilance and efficiency of its officers. This is true because conservation in Wisconsin, aside from forestry, pays its way entirely from money earned by the sale of licenses, tags, sale of confiscated goods, etc. Having an efficient force of wardens in the field is a tremendous stimulus to the sale of licenses, which augments the revenue of the commission and makes possible further activities.



"The Admiral." Green Bay and Lake Michigan enforcement boat with headquarters at Green Bay. Picture taken on return from a stormy, winter cruise.

Status at Beginning of Biennium

The period preceding the biennium was one of readjustment for the division of law enforcement. During the preceding biennium the offices of district wardens were abolished, and the chief warden assumed the responsibility of supervising all warden activities in the state. The office of the chief was moved from Antigo to Madison. Still another readjustment was brought about by the decision of the commission that all field men should equip themselves with standard uniforms.

At the close of the biennium 1926-1928 there were 62 regular conservation wardens. The record made by these men, the best ever made in a like period of time previous to the present biennium, reflects favorably both on the quality of officers and the public sentiment in most of the communities in which they worked.

WARDEN RECORD TOTALS

Decade 1920-1930

Year	Arrests	Seizures	Fines
1920-21	1,030	693	\$45,755.00
1921-22	1,205	794	50,065.00
1922-28	793	644	36,095.00
1928-24	526	269	20,760.00
1924–25	605	318	26,485.00
1925–26	1.049	561	45,500.00
1926-27	1.210	893	50.885.00
1927-28	1.438	941	57.068.50
1928-29	1.556	1.257	54.475.00
1929-80	2,085	1,688	71,960.00
Total for decade	11,497	8,531	\$459,048.50

Obstacles to the Program

Absence of favorable public opinion toward game law enforcement, as reflected in certain district attorneys' offices and courts, is still the greatest handicap in preventing game law violations in Wisconsin. In some counties it is almost impossible to secure conviction of a violator. It is rather interesting to note that those counties whose courts and district attorneys are the worst offenders in this regard are the counties whose economic welfare is most dependent upon a wise administration of its wild life resources.

This attitude may be reduced eventually, but it cannot be reduced without an extreme change in public opinion in certain sections of the state.

Conservation wardens have to cope with two kinds of violators. The one which presents the lesser problem is the unintentional or accidental violator. A policy of seeking to prevent violations rather than merely to punish violators is working out excellently with this type of violator. Publication of conservation rulings and laws, warnings by wardens, and the mere known and advertised presence of wardens in communities has an excellent effect in deterring the casual violator.

But the other type and one which presents the greater problem is the habitual and intentional violator, particularly the one who violates for commercial purposes. This type cannot be changed by warning. The only recourse left to the officer is arrest. Proper cooperation from district attorneys and courts will bring severe sentences upon these commercial and habitual violators which will in the end reduce this vicious type of violation.

Selection of Officers by Competitive Examination and Trial .

Appointment to a position as conservation warden depends entirely upon the mental, moral, and physical fitness of the applicant. Applicants for warden positions must pass what is probably the most comprehensive examination given by the State Bureau of Personnel, and in addition to passing an examination, must stand up under two actual tests of warden work.

The examination is competitive and consists of four parts. The first is the application and medical certificate of physical fitness which each applicant must file with the bureau of personnel prior to the time of the examination. This states his general qualifications for the position.

The second part is the written test, which is held by local examiners of the bureau of personnel in the various county seats. The sets of questions and a list of eligible candidates are sent to each of the local examiners by the Madison office of the bureau of personnel, and notice is also sent to each eligible candidate. This written quiz



"The Hornet." Lake Superior enforcement boat with headquarters at Ashland.

consists of 250 questions, most of which concern conservation and law enforcement matters. These questions are formulated by officials of the bureau of personnel in co-operation with the superintendent of law enforcement.

The third part of the examination is practical, in which each candidate attempts to classify 30 marked birds—game, song, and unprotected—and pelts of approximately 20 animals. These birds and animals are native to Wisconsin, and complete knowledge of them is essential to the successful performance of a warden's duties. In this part of the examination, besides the identification of the mounted birds and animal pelts, each candidate must name and classify 35 varieties of fish and approximately 65 native birds and animals from colored plates.

The fourth part of the examination is oral, conducted by the director of the bureau of personnel and the superintendent of law enforce-

ment. This oral quiz is to determine the personal fitness of the candidate for the work of a conservation warden, and is comprehensive in scope. Upon certification, a man is given a probationary appointment by the conservation commission to work for 60 days with an older warden. If the candidate makes good on this appointment he is sent out alone, and if he proves satisfactory he may be recommended for regular employment.

New Districts

In the last biennial report of the commission it was recommended that wardens be placed at Fond du Lac, Richland Center, La Crosse, Kenosha, Wausau, Florence, Goodman, Solon Springs, Mauston, Menomonie, and Star Lake. During the biennium just closed, seven of these posts, and two others, have been filled. The new posts are: Florence, Fond du Lac, Kenosha, Mauston, Menomonie, Richland Center, Sturgeon Bay, Wausau, and West Bend.

New Equipment

During the past two years the conservation commission has been equipping the law enforcement division with boats, engines, field glasses, and other equipment so that the officers might better cope with any type of violation.

A 50 foot boat, the "Admiral", fully equipped in every way, has been built and stationed at Green Bay. This boat is used in enforcement work concerning outlying water commercial fishing, and also to plant lake trout and help supervise spawn taking in Green Bay and Lake Michigan waters.

A 26 foot boat, the "Hornet", has been purchased and stationed at Ashland for supervising and inspection work on the reserve waters of Lake Superior.

A small 18 foot cabin boat, the "Wasp" with outboard motor attached, has been built for patrol work on the Mississippi river and stationed at La Crosse. It is used to patrol the waters of the river from Lake Pepin to the southern Wisconsin border.

Besides these large boats a number of smaller boats, canoes, and outboard motors have been purchased and placed at warden stations throughout the state where they can best be used for patrolling rivers and lakes.

Warden Schools

During the biennium the commission revived an older policy of conducting warden schools. One of the purposes of the schools is to acquaint each warden with the work of other parts of the state so that any conservation warden may be transferred to a distant district at a moment's notice and be able to cope with situations he might find there. Another purpose of the schools is to teach the wardens how they may co-operate more effectively with other divisions of the conservation commission, and to coach them in matters pertaining to enforcement work and court procedure.

The schools in the biennium were held early in March of 1930. The schools lasted for two days each and were held in Ladysmith, Antigo,

and Madison. Every warden in the state attended one of these three schools.

The Noyes Conservation Warden Efficiency Award

With the idea of instilling a feeling of friendly competition among conservation wardens and urging them to do even better work, Commissioner Haskell Noyes of Milwaukee offered to present a silver cup to the warden making the best record during each year, which for purposes of the award runs from December 1 to December 1. Each warden winning the cup will have his name engraved upon it.

The bases of judgment for selecting the best warden each year include the methods with which he handles his cases and seizures, his citizenship and general appearance, his co-operation with other departments, his care in making reports and answering inquiries, and any unusual service rendered by the warden.

Each of the six conservation commissioners, the director, the deputy director, and each division head will select the five conservation wardens who in his opinion are most deserving of the award. After receiving all recommendations, a central judging committee consisting of one commissioner to be chosen by the commission, the director, and superintendent of law enforcement will select the winning warden from those recommended by the executive heads of the commission. Decision shall be made entirely upon the basis of the recommendations.

Conservation Warden Uniform

In 1927 the conservation commission passed a resolution to the effect that all regular conservation wardens equip themselves with standard uniforms. The first uniforms failed to meet requirements and care was taken that the second uniform would be satisfactory.

Special Conservation Warden Activities

The activities of a conservation warden in Wisconsin are more varied today than they have ever been before. In addition to his regular duties, patrolling his district, preventing violations, and apprehending violators, the warden today co-operates with all divisions of the conservation commission and other state and federal departments, as well as co-operating with the enforcement departments of other states and the federal government.

Departments with which wardens are called upon to co-operate more or less frequently include the Railroad Commission, the Board of Health, the Public Land Commission, Department of Agriculture and Markets, and the United States Biological Survey.

Few of these activities would come within the province of the old type "game warden." Today Wisconsin's officers are "conservation wardens" in the true sense of the word.

In regular law enforcement work the wardens co-operate whenever necessary with the wardens of Michigan, Minnesota, Iowa, and Illinois in protecting the game and fish of border lands and waters.

The co-operation with the federal wardens proves extremely valuable particularly in cases involving migratory birds and the Lacey act. Wisconsin wardens frequently turn cases of this nature over to

the federal wardens when the situation can be better met in federal court. The help of the federal wardens is also valuable in tracing shipments of illegal furs outside the state.

Another phase of co-operation in law enforcement, which is proving more worthwhile constantly, is that made possible by the statute making all sheriffs, deputy sheriffs, coroners, and policemen ex officio deputy conservation wardens.

New policies and new activities have tended to make the work of a conservation warden more complicated during the past two bienniums. A warden is subject to special assignment at any time. Fre-



Clearing a channel through a beaver dam to drain the flowage. Picture taken during state activities in removal of beaver.

quently cases arise in which a local warden is too well known to be most effective. At such times one or more "undercover" men may work in the district unknown to everyone in the district.

Frequently there is a concentration of several wardens for short periods of time in localities where violations are particularly rampant. Such concentration is particularly effective in the northern part of the state during deer season.

Still another activity is the trapping, transfer, and release of certain animals and birds in co-operation with the division of game. This may be done to furnish breeding stock at the game farm, or for depleted areas, or it may be done to reduce the numbers of certain species which may become too numerous in limited localities.

State removal of beaver has become an important activity for some wardens. From a point of practical extermination in 1915 these

interesting and valuable animals increased to be quite common in 1930. In 1915 there was but one known colony in the state, but by judicious introduction in other districts the species has increased gratifyingly. Beaver benefit the state in many ways, principal of which is the creation of natural fire breaks by their flowages. During dry fire seasons, beaver flowages frequently constitute the only source of water to fight the flames. Flowages also act as breeding ponds for waterfowl, and refuges for trout, increasing the retreats of birds and numbers of trout.

Outstanding Cases

The hazards are many in conservation warden work. Frequently conservation wardens find themselves in extremely difficult and dangerous positions. At such times it is only by the most extreme good judgment and quick thinking that they can carry through with credit to themselves and the department. Occasionally a warden loses his life while actively performing his duty. This happened three times during the past biennium; one warden was drowned, another shot and killed, and the third was killed when the car in which he was riding was struck by a train.

Two comparatively recent cases, in one of which a warden was killed, will illustrate the type of situations which wardens must face frequently.

1. A big city gangster has a large home on a lake in Sawyer county where he lives much of the year with varying numbers of his henchmen. Several times reports were made both to wardens and to the office at Madison, that this gangster and his men were fishing illegally in the refuge on the Chippewa river below the Winter dam.

On November 20, 1929 conservation wardens arrested this gangster for the first time. After paying a \$50 fine he made threats to the wardens saying among other things, "Next time you had better come shooting because that's how you'll be received!"

During the following summer reports were made that the violations were continuing and that armed guards were placed to insure against the approach of wardens. Several times groups of wardens were sent to the vicinity, but were unsuccessful as the violators were warned of their coming and ceased violating.

On August 14 a group of wardens armed with rifles, went on to the river nine miles above the dam, in the flowage. That evening they proceeded downstream by canoes to a point two miles above the dam where they camped for the night.

The following morning was foggy and wet and the wardens, by use of extreme care, approached the dam without alarming the several guards who were posted in the woods. The gangster and two of his men were fishing illegally, and they were all arrested before the guards knew the wardens were in the vicinity. The armed guards were severely upbraided by their leader for failing to detect the wardens' approach. The violators were taken into justice court at Fish Trap and each of them pleaded guilty and was fined. The

wardens involved in this case used excellent judgment and probably avoided serious trouble by so doing.

2. On May 16, 1929 Warden Einar P. Johnson of Ladysmith, and his assistant Allen Hanson, were following a car known to belong to a fur bootlegger whose activities were being watched by several wardens. The car was quite a distance ahead of the wardens' car and when their car got to the top of a hill on a county road about nine miles north of Ladysmith, they saw that the car they were following had skidded and was partly in the ditch beside the road. They stopped their car and were walking toward the stalled car when a man came out of the woods to the car. The wardens were suspicious that he had gone into the woods to hide some furs, and Johnson asked Hanson to look for them.

While Hanson was searching, Johnson kept questioning the man whose name was Amio Maisio, of Finland, Minnesota, an associate of the fur bootlegger. After about 15 minutes Hanson found a pack sack of furs and carried it back to the road. While they were opening the pack sack Maisio jumped to one side of the stalled car, drew a gun and started to shoot. Johnson was shot through the groin, the .45 calibre bullet also breaking his left hip, but he drew his own gun and shot Maisio through the body while he was trying to escape. Hanson was unarmed, and after the shooting he went to a nearby farm house for help.

When he returned, Johnson had left, walking a quarter of a mile through the woods to a farm from where he had been taken to the hospital at Ladysmith. He died the following day.

When Hanson returned to the scene he found that the owner of the car had returned, had abandoned his comrade, and had fled. He got away into another state.

Maisio was taken to Ladysmith, first to the hospital, from where he was transferred to the county jail to await trial for murder. The case was tried in circuit court in the fall term of 1929, and Maisio was found guilty of third degree manslaughter and was given the maximum sentence. He is now serving a seven year sentence in the state penitentiary at Waupun.

Warden Johnson exhibited good judgment in this case. He had no reason to believe that the man would start to shoot, and no right to search the man for a gun until an arrest had been made. It is an unfortunate condition in officers' work that under most circumstances an officer cannot shoot first.

Supreme Court Decisions

Several decisions of the supreme court of tremendous significance to the law enforcement division have been handed down during the biennium. Each of these upheld statutes having vital bearing on enforcement activities.

1. The right of a conservation officer to arrest anyone he sees violating the conservation laws either at the time or later, with or without a warrant, was upheld in the case of James Muska, Jr., respondent, vs. Edward Apel and E. P. Johnson, appellants. This decision also

stated that damages cannot be assessed against any state conservátion warden for false arrest in performance of his duty.

- 2. The case of Hermann, respondent, vs. Mac Kenzie, appellant, upheld the public nuisance statute of the conservation laws. As a result, any personal property which is proved to be used in violating the conservation laws is a public nuisance and subject to confiscation without the right of replevin.
- 3. Although the case of Halbach vs. State is not a conservation commission case, the decision has vital significance for the work of conservation wardens. In this case the supreme court ruled that an



"Amik," the beaver.

officer has a right to search any automobile that he has good reason to believe contains contraband, and that he may also open and examine any baggage contained therein without a search warrant.

4. The state's absolute ownership over all game animals and birds, and over all fish whether in inland or outlying waters, was upheld in two decisions. In the case of Krentz vs. Nichols the supreme court ruled that the state has sole ownership of wild animals, and that they can be reduced to possession only in a manner prescribed by the state. In the other case, brought against the conservation commissioners by several Lake Michigan commercial fishermen, the court ruled that the state's ownership of fish extended to the commercial fish of Lake Michigan.

INDIVIDUAL WARDEN RECORDS 1928–1929

	District	Causes	Won	Lost	Fines	Sentences	Costs	Seimres
Alderman, E. L.	Portage	29	88	9	\$2,300.00	09	\$547.92	8
Apel, Edw.	Eau Claire	86	23	63 6	1,130.00	33:	284.18	7
Baie, Arthur	Marinette	18	* 68		1,476.00	240	144.61	81
Boomer, I. H.	Oshkosh	6 4	9	•	100.00	99	3.5	45
Button, Percy	Fond du Lac	2 4 °	12.0	- G	20.09	150	84.80	3-
Chase, A. C.	Oshkosh Wisconsin Renids	88	31	4-	1,650.00	စ္တင	133.38	91 8
Cranston, D. M.	Wausau	30	6	10	400.00	46	178.29	901
Curtis, P. S.	Viroqua	81 8	o -	40	200.00	8	39.16	
Devine, Barney	Webster		4 00	-	300.00	° 29	58.59	·83
Devine, Thomas	Spooner	2:	7:		450.00	180	128.49	40
Dockham F. A	Milwaukee	2:	22	>-	825.00	> c	78.07	25
Dunham, A. E.	Oshkosh	91	92	0	550.00		75.54	16
Edick, James	Crandon	33	;	ю.	980.00	270	222.89	3,
Effect, John	Whitewater	64	4 4	70	960.00	-	528.88	∞ ≪
Fee, Edward	Madison	25	18	- 00	650.00	• •	181.86	•
Fisher, F. W.	Oconto Falls	9	90	00	80.00	0	38.75	.
Fomot, J. B.	TomanawkRhinelander	» –	- 12	-	25.00	2 °	07.80	.
Giesen, Louis.	Fountain City.	'=	1	0	00.009	•	88.82	18
Grange, W. B.	Madison	-6	٦,	0 -	20.00	0	16.00	•
Grader Paul	Lake Tomahawk	ā-	g		1,200.00	-	15.19	e ro
Grey, W. T.	Ashland	10	4	-	200.00	9	19.54	8
Gruebner, H. C.	Sheboygan	128	25	0	650.00	00	118.82	20
Hanson, Allen	Ladysmith	-		00	200	0	2.50	.
Happle, Max	Iron River.	3 °°	N ®	90	10.8	28	18.60	3 =
Hayner, 8. W.	Three Lakes	\$0	80	20	1,475.00	9	260.19	61

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Jenke, Lewis	Appleton	••	885.00 985.00	-\$	178.78	•
Johnson, George	pter	•	850.00	85	34.98	
Johnson, T. G.		-0	876.00	30	90.42	-
Keeler, John G.	Madian	-	20.00	0	8:	
Kirknatrick, Alvin		•	8.8	-8	904.70	•
Kramer. Emil		- -	80.00	2	180	•
Lake, R. J.		> «	800.003	88	39.66	••
Lange, Elmer	LA Crosse		250.00	0	20.10	••
Lanning, B. P.		• •	840.00	210	127.70	
Tee, Albert		7	80.00	•	38.92	
Long, Frank	Mellon 28	•	900.00	180	95.09	•
Long, John		•	25.00	2	8.6	
McDonald, f. J.		63	60.00	9	22.20	•
Mention In Common.	A	•	8.99	0	97.2	•
Moeller, 1rs G.			410.00	186	178.98	
Omernick A	Trout Lake	•	20.00	200	3.4	·
Otto Charles		•	20.00	25	20.00	
Ochira. W. A.		>	3.00	3	9.00	
Patterson Matt		- ·	25	•	- 1	
Percy. H. E.		>	80.03	180	64.11	
Perry Les M		> 0	36.65	3	166 69	
Peterson, A. G.		7-	3.5	ร		
Powell A. W.			200	3	147.12	
Raeth, Valentine		-	1 KK . O	-	108 06	
Randall, Frank		-	200	•	124.27	
Reabe. Wm.		> 0	200	178	181.68	
Red C L		, N	36	0 0 0	24K 6K	
Rheaume, I. C.		7	35	3	69 176	
Riche W H	Eagle River	• ;	35	9	918	
Pohingon A I		1 91	36.69	38	100.00	. •
Rows Hallie	.V	0	00.00	3	181.00	•
Semneon Andrew		-	200	-	16.90	
Schemble O. I			36.66	g	99	
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INDIVIDUAL WARDEN RECORDS—Continued

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Cases	22 22 28 1 18 1 18 1 18 1 18 1 18 1 18		WARDE 1929–1930	Cases	25230 110344 1100 1
District	Hayward Shawano Thorpe Trinceton Princeton Sturgeon Bay Sturgeon Bay Woddingn Woddingn	Per cent of cases won	INDIVIDUAL WARDEN RECORDS 1929–1930	District	Portage Eau Claire Menomonie Marinette Park Falls Outkout Mertill Outkout White Lake Parkeville
Warden	Swift, Ernest Tic, Arthur Ticleman, H. C. Trainor, D. O. Vanderkelen, Alfred Webwier, Percy Webwier, B. O. Weavier, B. O. Woavier, E. M. Worden, J. D.			Warden	Alderman, E. L. Apel, Edward Apel, H. B. Bale, Arbue Baconer, I. R. Boomer, I. R. Boworth, E. F. Button, Percy Chaes, A. C. Chaeson, W. P. Colburn, Roland

Device Berray Device Berra	Curtle, P. S.	Viroqua	 01°	 10 C		3.6	3		
Miles	Janian Barney	Wohater	- 4 -	- 4	-	780	. A	108 04	
Millwaultee	Sevine, Thomas	Spooner	98	28	-	850.00	198	108.58	
Control	Medrich, Peter	Milwaukee	14	81	2	1.740.00	0	516.85	_
Subboygan Subb	Oockham, F. A.	Baraboo	24	72	•	975.00	0	182.74	
Manitomarker September S	Junham, A. E.	Oshkosh	200	18	04	750.00	270	98.69	
Watchiowace 9 8 1 2,850.00 0 Madison 139 18 4 660.00 130 Coorto 130 1 660.00 130 Coorto 10 1 660.00 240 Madison 1 660.00 20 1 Malian 1 660.00 20 1 Malian 1 6 0 1 660.00 20 Malian 1 0 0 1 665.00 30 30 Interpreta 1 0	Sdick, James.	Sheboygan	88	8	•	875.00	320	224.84	
Maction Wellen 62 68 0 240 60	Sgan, John	Manitowoc	.	∞	_	820.00	0	88.88	
Madison	Cliott, W. P.	Whitewater	25	23	•	2,415.00	8	679.29	
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Tomahawk 10 10 10 10 10 10 10 1	Nakar W W	Oconto	9	~	_	965.00	•	158.89	
Midon	Pomot I B	Tomahawk	35	20	-	860.00	280	46.50	
Madison Madison 1	There I and	Donatale Otto	26	. 6	10	38	86	2	
Milton	Floren, Louis	Foundam Otty	9	9	-	3.		5	_
Mailton	stange, w. D.	Madison	-	-	>	2	9	•	
Action Comparison Compari	iray, K. A.	Milton	9	40	•	1,665.00	200	411.50	
Subleygean	Freider. Paul	Lake Tomahawk	20	-	0	•	120	6.70	
Substitution	Grev. W. T.	Ashland	00	•	-	20.00	80	7.87	
Darlington	Carobaor H C	Shehoroen	- M	- M	-	945 00	•	62.85	
Ladymith	The Date of the Control of the Contr	Darlington	-	-	-	200	946	116.40	
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Tomah	Havmer & W	Three Lakes	8	0.00	-	1 250 00	210	206.44	
Hammond 29 26 8 1 775 00 670 870 870 870 870 870 870 870 870 870 8	Tillibor Warl	Tomah	3 2	3 0		20.03	î	138.02	
Stevens Point 25 25 3 1,260 00 60 Loretta	This is a second of the second	Transfer and the second	98	98	-	36	8	76 966	
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Mactions	Tornberg, Frank	Stevens Fourt	22	2	20	7,260.00	3	12001	
District	Touford, H. M.	Medford.	8	16	∞	800.00	8	188.12	_
Philips	Iougen, H. O.	Loretta	2	99	4	1.890.00	165	812.83	_
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INDIVIDUAL WARDEN RECORDS—Continued

Two Rivers Two Rivers Two Rivers Two Rivers Torence Torence Torence Torence Torence Two I ake Two II	Warden	District	Cases	Won	Lost	Fines	Jail Sentences	Costs	Seizures
Florence.	Western Tea	Turo Bivore	12	15	6	\$815.00	0	\$188.80	15
Trout lake	Nixon R.	Florence	25	87	12	1,425.00	240	831.96	56
Marinette 11 11 11 10 125.00 60 Keroshe 24 23 1 1,165.00 150 Wausen 72 66 7 3,875.00 650 Wausen 72 66 7 3,875.00 650 Bayfield 4 4 4 0 30 46 Mauyacd 4 4 4 0 30 46 0	Omernik, Anton	Trout Lake	-	0	-	0	0	0	•
Argente 2.2 2.2 2.2 1 1,66.00 100 Brule 6 6 6 7 2 1,66.00 100 Watasau 7.2 2.7 2.7 1,016.00 0 0 Rache 1 4 4 4 4 0 300.00 0 Bayfield 1 4 4 4 4 0 300.00 0	Osbesky, Louis	Marinette	11	=:	•	126.00	8	38.28	0;
Brule	Otto, Charles	Argonne	86	200	•	300.00	99	210.39	25
Water	Ozburn, W. A.	Kenosha	4 °	3	٦-	1,190.00	- §	212.94	21
Ractne	Percy, H. E.	Wanesu	2	. 29	-	8,875.00	2003	599.94	87
Hayward	Peterson, A. J.	Racine	63	27	01	1,015.00	0	210.76	4
Milwankee 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 6 100 0 <th< td=""><td>Peterson, P. C.</td><td>Hayward</td><td>•</td><td>•</td><td>•</td><td>0 8</td><td>0</td><td>0 5</td><td>9</td></th<>	Peterson, P. C.	Hayward	•	•	•	0 8	0	0 5	9
Watgaca	Powell, A. W.	Mayfield		4 00	>-	38.8	3	8.8	• ◄
Minocqua 18 18 18 18 19 18 19 18 19 18 19 18 19 18 19 18 19 18 19 18 19 18 19 18 19 18 19 18 19 18 19 18 19 19	Randell F D	Waunaca	7.	28	-	786.00	45	115.06	
Minocqua Minocqua 110	Reabe. Wm.	Horicon	18	18	0	320.00	120	170.10	2
Eagle River 2.5	Reed, Clifford	Minocqua	23	22	ø ,	20.00	110	140.04	3 8
Rhinelander Ragie Kiver 4.3 2.2 1.75.00 2.10 Rhinelander 2.3 2.2 1.75.00 0.0 Sturgeon Bay 2.2 2.2 1.75.00 3.0 Stord du Lac 2.8 2.6 1.775.00 3.0 Green Bay 4 4 0 90.00 0.0 Hayward 4 4 4 0 90.00 0.0 Hayward 4 4 4 0 8.0 0.0 Hayward 4 4 4 0 8.0 0.0 Hayward 4 4 6 8.0 0.0 0.0 Shawano 2.0 2.0 2.0 0.0 Wabeno Wabeno 2.0 2.0 0.0 Phillips 1 1 1 1 1 1 1 1 1	Rheaume, I. C.	Mercer	3,6	20.0	٥,	90.00	35	3.5	3.
Sturgeon Bay 25 1 725 00 9 1 1 1 1 1 1 1 1 1	Riebe, W. H.	Eagle Kiver	78	1 %	e «	175.00	210	201.92	ន
Stoughton	Rome Hellia	Sturgeon Bay	83	8		725.00	0	868.20	64
Rice Lake	Sampson, Andrew	Stoughton	92	22		800.00	2	206.90	81
Green Bay 20 20 1,500 100 Green Bay 4 4 0 00 0 Hayward 46 48 3 1,220,00 30 Decomomowoe 38 46 2 1,876,00 31 Shawaro 26 26 26 1,876,00 390 Wabeno 28 2 1,876,00 390 Phillips 28 2 1,876,00 390 Phillips 17 17 0 600,00 360 Phillips 17 17 0 600,00 0 0 Phillips 17 17 21 871,960,00 16 156 0 Phillips 17 21 871,960,00 16 6 0 16 6	Schwalbe, A. J.	Fond du Lac	918	22		675.00	39	289.93	90 g
Pembling Pembling	Scolman, J. T.	Rice Lake	90	90	, c	2002	200	20.00	8
Hayward	Shencer Carl	Pembine	• •	•		90.06	•	8.78	•
Hayward	Stairo. Leif	Hayward	6	6	•	0	8	26.30	•
Hambed H	Stiglbauer, F. A.	Oconomowoc	9 8	3 8	œ e	8.88	8	482.01	19
Thorp Wabeno. 25 26 0 150.00 120 250 Wabeno. 25 26 0 150.00 250 250 250 250 250 250 250 250 250 2	Swift, Ernest.	Hayward	807	84	• •	35.55	008	140.01	7 6
Walbeno 8 0 160.00 90 Princeton 28 21 2 860.00 360 Philips 17 17 0 600.00 0 0 Plainfield 2,086 1,874 211 \$71,960.00 11,561 \$15,	Tie, Arthur	Shawano.	0 10	25	40	220.00	120	166 41	1 6
Phillips 2 800 00 350 25 25 25 25 25 25 25 25 25 25 25 25 25	Tourtillott Rainh	Wabeno	00	∞	•	160.00	8	81.00	m
Plainfield 17 17 0 600.00 185 0 600.00 185 0 600.00 11,651 \$15,	Trainor, D. O.	Princeton	83	21	63	800.00	980	182.30	15
Frainheid 21,086 1,874 211 \$71,960.00 11,651 \$15,	Weaver, Harry.	Phillips	25	91	64 C	8.68	186	82.68	119 61
2,085 1,874 211 \$71,960.00 11,551	Worden, J. D.	Plainfield	=	=	2	80.00	>	8.8	
	Totals		2,085	1,874	211	\$71,960.00	11,661	\$15,140.81	1,688

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DIVISION OF EDUCATION AND PUBLICATIONS

Introductory

The history of the conservation program in the United States reveals a long uphill struggle, and one which has been successful proportionately as conservation workers have been able to enlist sympathetic and co-operative public opinion.

From the days of early beginnings when men like Increase Lapham and Carl Schurz, both of whom lived in Wisconsin much of their lives, first advocated conservation on a national scale, to the present when the federal government and every state have administrative conservation groups is a long step. It is a progressive step, one which is laying the foundation for correcting the wrongs committed by earlier generations, and insuring generations to come that they too will participate in those natural resources with which the United States was so bountifully endowed.

But the time of conservation work has been short compared with the time it took to create the destructive public opinion which has made conservation activity imperative. This attitude which, although less universally held today than a few decades ago is still too general, is the cumulative effect of three centuries of settlement made easy by free self-appropriation of any and all natural resources. Exploitation, both individual and collective, played its part and ran rampant until some more far-sighted men saw the end of that which was considered endless. Forests could be exhausted—game animals, birds, and fish could disappear.

The destructive movement gained such momentum in its unrestricted course of so many scores of years that it could not be checked immediately. Wise conservation measures and activities both in Wisconsin and in the nation, generally are slowing the destructive movement. They are succeeding in direct proportion to the amount of favorable public opinion they can generate. No conservation program can be entirely successful without the complete sympathetic cooperation of the public. Sympathetic co-operation can be expected only when there is general understanding of the magnitude and necessity of the program and the problems involved in its successful administration. Understanding will come with general education.

In 1928 the Wisconsin Conservation Commission created a division of education and publications to co-ordinate existing conservation educational activities and inaugurate new ones in order to have a centralized purposeful conservation educational program throughout Wisconsin. The creation of such a division at that time was a new idea in the Middlewest. The field for work was unlimited, but there was no precedent of method, and new paths of endeavor had to be

Since 1928 at least nine such departments have been started in other states.

There were three main reasons for establishing the new division:

 To educate the Wisconsin public in conservation matters.
 To disseminate information about Wisconsin's recreational resources to people outside the state.

3. To centralize the publishing of conservation reports, books, pamphlets, and bulletins.

Educational Media

Any educational program to be most effective, must choose the best media with which to reach the particular class of people it aims to reach. If an educational program is directed at more than one class it is necessary to use more than one method of approach.

Because the conservation program in Wisconsin will be successful in direct proportion to the numbers of people whose sympathetic cooperation can be secured, all classes have been considered in formulating the conservation education program and methods of reaching all of them have been planned. These methods aside from the school program which will be discussed in detail later, include: newspaper and magazine publicity; weekly and monthly releases from the department; public talks; still and motion picture photography; publication of books, bulletins, and pamphlets; participation with displays at fairs, outdoor shows, conventions, etc.; and the maintenance of an extensive information service. Each of these will be discussed in detail.

Newspaper Publicity

Little, if any, organized conservation educational activity had ever been carried on in Wisconsin prior to the establishment of the education and publications division of the conservation commission in 1928. There were no precedents as to method or material. This meant that an entire program had to be devised which would reach those citizens already adult as well as those in the schools of the state.

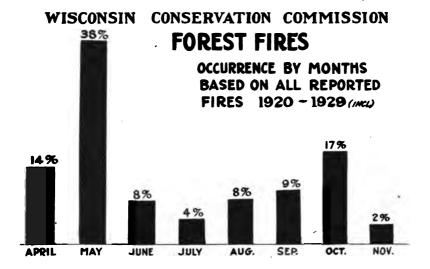
There is no doubt that the future of the conservation program depends largely upon the attitude the students of today will have toward it as citizens tomorrow. But in the meantime it is necessary to make a bid for the understanding and co-operation of the adult citizenry of the state.

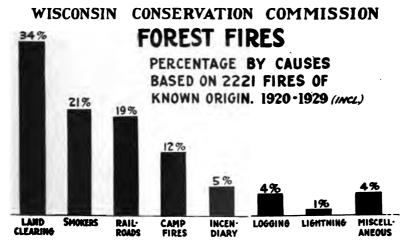
To reach the people of the state generally, the press offers the best and easiest medium. It is best because it reaches most, and it is easiest because of the sincere attitude of helpfulness exhibited by practically all newspapers in the state. A questionnaire sent to every editor in the state shortly after the division of education and publications began to function in July 1928, revealed that of the nearly 400 newspapers in the state, both daily and weekly, there was only one that did not promise co-operation.

Consideration of newspaper publicity should come under three distinct headings: Wisconsin daily papers, Wisconsin weekly papers, and special service including that furnished to papers published outside the state.

a. Wisconsin dailies. Practically every daily newspaper in Wisconsin is served by one of the two principal press associations, the Associated Press, or the United Press, and it is mainly through the medium of the press associations that conservation news has been furnished to the dailies.

There are three principal reasons why the press associations offer the best medium of reaching the dailies: (1), newspapers value





Two bar charts used in forest protection exhibit. The originals measure two and one-half by three feet.

most highly the news they receive from the association; (2), the extreme low cost of disseminating the news for the conservation commission; and (3), the excellent attitude of co-operation shown by both associations in treating the news coming from the department fully and accurately.

Several newspapers which maintain Madison bureaus receive the same service accorded the press associations. Whenever a representative of either press association, of the special bureaus, or of a newspaper from outside the state, makes a special request for information or articles, it is furnished to that representative exclusively. This also holds true for any newspaper, daily or weekly, published within or without the state that writes for information or articles. After the initial exclusive use, the same information is frequently disseminated in some other form, but never in such a way that it will detract from the value of the first exclusive story.

A careful distinction between news and propaganda is made before any stories are released. News is the primary requisite, and without an element of news no story is released. Releasing newsless stories would soon destroy the confidence of the newspaper men with the ultimate result of lessening the efficiency of the division.

The news stories released by the division cover all policies and activities of the commission, and an attempt is made to present to the papers of the state a well balanced program of stories which relate the progress of all divisions impartially. An average of one release a day is maintained, and during an average week each division of the commission is represented at least once.

At certain intervals inchage counts are made of the clippings from Wisconsin papers containing stories originating from the office. One of these counts, made during the summer of 1929, a normally "dead" period from a newspaper standpoint, reveals the following interesting figures. These figures represent the total number of column inches devoted to releases from the division of education and publications in approximately two-thirds of the daily papers of the state.

COLUMN INCHES OF CONSERVATION RELEASES

Month	nches
July	4,031
August	

The number of column inches which newspapers devote to publicity releases should not be the only criterion by which the effectiveness of a publicity service is judged. But they do indicate whether the newspapers of the state are interested in the material prepared and whether it is prepared in a usable form.

b. Wisconsin weeklies. Publicity service to weekly papers if it is to be effective, must vary in quantity, type of material, and method of writing from the service supplied to dailies. Weekly papers have smaller circulations, but are more carefully read. Timeliness is not as important a factor from the news angle, but it is vitally important

to have publicity material for weekly papers reach the newspaper office at a time preceding the weekly publication rush. Weekly papers demand stories with more local interest.

Shortly after the division began to function, a mimeographed weekly news release was devised which included, in each issue, from four to seven short stories detailing different conservation activities. Whenever possible, there are stories included which will have a particular appeal to certain sections of the state. By this means, papers in the particular sections of the state have their interest drawn to a particular story, to the entire release, and to the service.

This weekly service averaged three releases a month during the biennium. It is not sent to daily papers, but the mailing list includes many magazines, sportsmen's organizations, school libraries, women's clubs, and individuals. The weekly release and all other releases of the division are sent to all officials and employees of the conservation commission.

Special service. Stories having local interest to a particular town, city, county, or section of the state are sent to local papers only. Both dailies and weeklies are included in this special service. Whenever any paper in the state requests special information, pictures, cuts, or matrices, the request is granted as promptly and thoroughly as possible. Frequently special feature articles originate in the office and are sent to those papers whose readers would be most interested.

Stories and articles are likewise prepared for newspapers published outside the state in response to requests for information. Such stories are prepared so that they will advertise the state's recreational resources. Frequently during the biennium illustrated advertising stories have been published in papers in cities as far distant as Omaha, St. Louis, Kansas City, and Indianapolis. Stories without pictures have been printed in New York, Washington, and New Orleans papers. An attempt is made to send material to papers published in Wisconsin's recreational trade area.

Another type of out-of-state newspaper publicity and one which adds materially to the prestige of Wisconsin, is furnishing articles explaining conservation progress to such papers as the World and Herald-Tribune of New York, the Washington United States Daily, and the Detroit Times.

Magazine Publicity

Regular conservation sections were maintained in two magazines published in Wisconsin, the Wisconsin Magazine, and the Land O'Lakes Magazine, prior to their merging. Since the two consolidated the conservation section has been continued. This section details the progress of the conservation program.

Special interest articles have been prepared and published in other Wisconsin magazines, particularly those magazines catering to a specific public such as the farm magazines. Illustrated articles have been furnished to several trade publications and house organs published by Wisconsin industries, but circulated all over the country.

One or more illustrated articles have been furnished to 12 national magazines, including the *Literary Digest*, *National Sportsman*, *Out-Door America*, and several other outdoor and sportsmen's magazines. In addition to the special articles the regular weekly and monthly releases go to many magazines and out-of-state papers, including all conservation publications. Reprints from these services are frequent.

Monthly Summary

Early in the biennium the commission inaugurated a policy of making public the names of all persons convicted of violating the conservation laws. It was thought that such publicity would act as a deterrent to violations as many persons who would willingly take the chance of being arrested if they thought there would be no publicity, hesitate and desist when they know their names will be made public if they are convicted. That this policy is correct is indicated by the fact that several people have attempted to have their names kept out of the summary. None of them have succeeded.

When first begun the monthly summary was printed but the element of timeliness made printing unsatisfactory because of the necessary delay. All but the first two issues of the summary have been put out in mimeographed form on legal sized sheets. It varies in size from 12 to 20 pages.

During most of the biennium the monthly summary included news stories, tables, and charts of the conservation program in addition to the arrest reports. The demand for the monthly summary has increased greatly. When first started there was a mailing list of approximately 200; at the end of the biennium this had increased to 1,200. It is sent to judges, district attorneys, secretaries of all sportsmen's organizations, all newspapers in the state, many schools, libraries, clubs, and to many interested individuals.

Public Addresses

Almost immediately after its beginning, the division of education and publications assumed the bulk of the public speaking engagements for the conservation commission. This was continued throughout the biennium and the superintendent of the division averaged at least three public addresses a month.

Groups spoken to included practically every type of organization in the state, including schools, service clubs, women's clubs, boy and girl organizations, and church clubs.

Another important phase of the public speaking program is the extensive use of radio. During the biennium radio talks were given over four stations: WLS, WTMJ, WHA, and WIBA. Several series of talks totaling 35, were given over WHA, the University of Wisconsin station at Madison. These series included talks on recreational resources, Wisconsin state park and scenic attractions of the various sections of the state, activities of the conservation commission, and descriptions of different species of Wisconsin's birds, animals, and fish.

Photography

The subject of photography divides itself into two headings: still and motion pictures.

a. Still photography. Prior to the establishment of the education and publications division there was no accurate system of filing



One of the six fire prevention display panels. The panels are three feet wide and three and one-half feet high.

photographs and no program of photography. All usable photographs in the files were re-arranged and cataloged and a foundation built upon which to develop a future photography program.

Several series of photographs detailing various activities of the department have been made during the biennium which will find ulti-

mate use in sets of lantern slides. They will also be used in publications and newspaper and magazine publicity.

b. Motion picture photography. An excellent beginning has been made in compiling a library of motion picture films for distribution throughout the state. This was made possible partly by means of a co-operative agreement with the Milwaukee Public Museum whereby that institution made available to the commission any of the motion picture negative from their files that the commission might be able to use. What little negative was owned by the commission was likewise made available to the Milwaukee Public Museum. This co-operative agreement will continue and should prove invaluable in years to come.

At the end of the biennium the division had available for public distribution the following reels:

The Wisconsin Prairie Chicken	2	reels
Sand Hill Crane	1	reel
Moon Lake Refuge	2	reels
Blue Heron	1	reel
Wisconsin Waterfowl	2	reels
Wild Life in the Land O'Lakes	3	reels
Winter Logging in Northern Wisconsin	2	reels
Horicon Marsh		

These were secured either through co-operation with the Milwaukee Public Museum, or by the direct efforts of the division in doing the photography.

Aside from the finished reels which were being distributed at the end of the biennium, several other reels are in process of editing. These include the following subjects: Wisconsin the Beautiful, State Parks, Hatchery Operations, Wisconsin Beaver, Wisconsin Predators, and Game Farm Operations.

To facilitate distribution matters, the commission entered into an agreement with the University of Wisconsin bureau of visual instruction whereby the bureau of visual instruction distributes in their regular way, all the films and lantern slides owned by the commission. There are inadequate facilities for checking, rewinding, and repairing film in the Capitol, and all these facilities are available at the university. This service costs the commission nothing. The bureau of visual instruction makes a nominal service charge to the user of 50c per reel.

Publications

A beginning was made during the biennium on an elastic publication program which can be expanded in the future within limits prescribed only by available funds. Publications issued during the biennium include the biennial report, "Forest Trees of Wisconsin," conservation laws of 1929, summary of fish and game laws, conservation warden's manual, description of fish refuges, and a state park bulletin.

The division also co-operated with other state departments in issuing publications, contributing both copy and illustrations. Among these contributions might be listed the description of Wisconsin's

state parks, and article "Scenic Wisconsin" on the back of the 1930 official highway map. Illustrations for use on the back of the highway map were also furnished by the division.

School Educational Program

Conservation teaching in the past for the most part, has been haphazard and rather purposeless. In certain schools because of



Another of the fire prevention display panels described on pages 121 and 126.

inspired and inspiring teachers, the work has been excellent. But other schools had no way of learning of the activities of schools and teachers doing the excellent work. A centralized source can act as a clearing house for methods and ideas.

It is proposed to transpose these hitherto helter-skelter efforts into new paths with regularly organized courses and methods of study and with a direct and distinct goal of endeavor. The means accomplishing this will be an attempt to correlate present study with different phases of conservation activity in this way given new and interesting significance to the studies which at present be difficult for teachers and uninteresting to students. Any activity in the conditions of knowledge and the easy which increases the attractiveness of knowledge and the easy in civic conditions.

At the close of the biennium the division had worked out a property of conservation education in Wisconsin schools which met approval of the state superintendent of public instruction and conservation section of the state teachers' association. This property will be expanded and if methods indicated in it are found to be well able, complete correlative courses of study will be worked out to be introduced in all Wisconsin primary and secondary schools.

If methods indicated in the proposal for conservation education to be established in Wisconsin schools, a dual purpose will be acceptabled. Because of its correlative nature this method of conservation education will help in the creation of the necessary favorable public opinion and it will accomplish this primary purpose without being burdensome in any way to the school curriculum.

Outdoor Shows

Principal among the out-of-state educational activities of the desision has been participation in five outdoor shows during the biennium, three of which were held in Chicago. At the National Outdoor Show in Chicago which is held each May at the Coliseum, Wisconsin has been represented by a large and impressive exhibit during both years of the biennium. One entire corner of the large Coliseum floor has been devoted to Wisconsin's display.

Several railroad carloads of exhibit material including trees are forest greenery, live animals, live birds, live fish, and several mounts specimens are taken to Chicago each spring for this show. Wooding scenes are created with the aid of painted backgrounds and in the scenes are arranged the wild life exhibits. Thousands of pieces literature are distributed at these shows.

For the 1930 show the division purchased six new type acceptable which made possible a better live fish display than Wisconsin ever been able to have before at one of these shows. Fish exhibiting included pickerel, pike, muskellunge, bass, and brook, brown, rainbow trout.

Among the live animals and birds were two full grown bear, the bear cubs, wolf, wildcat, badger, several raccoon, wild American turkeys, and ducks.

Between 175,000 and 200,000 people visit the National Outdoor Show each year and the benefits derived by the State of Wisconsia are directly proportionate to the size of its exhibition.





It was interesting to note during the summer of 1930, a year of depression, that for the first six weeks of the fishing season which opened immediately following the outdoor show, non-resident license sales exceeded the previous year's record and did not slump until the latter part of the season.

In April of 1930 the commission was represented by a pictorial and educational display at the National Sportsmen's Show held in the Stevens Hotel at the time of the international convention of the Izaak Walton League of America. This was a booth display with illuminated panels at the back to attract attention. Approximately 40,000 people visited this booth.

During the two years of the Milwaukee Sentinel Outdoor Life Exposition in Milwaukee the commission has been represented by a display. In 1930 the entire stage was devoted to the commission's exhibit and a woodland scene was created here similar to the one in Chicago. As the Milwaukee show followed the Chicago show, many of the same materials used in Chicago were used again in Milwaukee.

The railroads of the state do much toward making the state exhibits a success by donating the use of baggage cars for shipping woods material and of granting to the state free shipment of animals, birds, and fish both to Milwaukee and Chicago and return.

Fairs

The exhibit at the Wisconsin State Fair of 1930 exceeded in size anything which has been attempted for many years. Besides a fish display held at the aquarium building, a series of eight pens was built in which were exhibited animals and birds from the state game farm. The exhibit attracted a great deal of attention.

Thirty aquaria were filled with various species of fish taken from all sections of the state. The educational value of this fish exhibit is tremendous.

In the specially built pens, black bear, deer, wild American turkeys, pheasants and some predatory birds including great horned owls and red-tailed hawks, were exhibited. The conservation commission had never before had an animal and bird display, and it drew a great deal of favorable comment.

During the summer of 1930 the education and publication division, in co-operation with the forest protection division, planned an extensive fire prevention display and made arrangements to have it exhibited at 22 county fairs within the forest protection districts. The extreme fire hazard and severe season necessitated cancelling this program, but the display was fully prepared and is available for use at other places during the winter and can be used in the future for county fair exhibitions.

Display Boards

Another type of visual education and publicity has been the preparation of large display boards measuring three and one-half by six feet when opened. Each one of these carries a pictorial conservation lesson. These display boards have been used to excellent advantage

both in public exhibitions at fairs and outdoor shows, and conventions, and also for shipping about the state to be used in display windows.

Some of the lessons which have been arranged in picture form on the boards are the story of the ruffed grouse or partridge, the prairie chicken investigation, forest planting, fire fighting, damage wrought to game and fish by fire, and identification of forest trees. Some of the boards were taken on the good will tour, but these displayed scenic pictures of Wisconsin and Wisconsin state parks.

Other Displays

The conservation commission has been represented at conventions and meetings during the biennium. At both annual state teachers' conventions held during the biennium, the commission had a display put on in co-operation with the Boys' Technical High School of Milwaukee, and the Milwaukee chapter of the Izaak Walton League. The display at the state teachers' convention the second year of the biennium, was a co-operative venture with the United States Forest Service as well as the Boys' Technical High, and the Milwaukee chapter of the Izaak Walton League.

At the convention of the state federation of women's clubs the commission has been represented by an extensive forest protection display, and educational and display material have been furnished for conventions for the Izaak Walton League and other groups.

On both annual good will tours sponsored by state departments and private enterprises, the commission has been represented by one complete baggage car exhibit. This display is made to advertise Wisconsin's recreational resources. Both years the tour has gone into southern states and the cool fragrance of Wisconsin's north woods in the conservation commission's car was among the leading attractions of the entire good will train.

Informational Service

The division maintains an extensive informational service. All general letters requesting information about conservation are referred to this division, as are requests for educational material. Bundles of printed and mimeographed pamphlets and leaflets on different conservation subjects are furnished free of charge.

Museums

The commission during the biennium, ordered the beginning of a new activity for the education and publications division in the establishment of state park museums. A mere beginning was made in this activity. A building was set aside at Devil's Lake State Park to house a museum there, and the Milwaukee Public Museum generously gave to the commission enough display cases to fully equip the museum at Devil's Lake State Park. It is planned that the Devil's Lake State Park museum and others to be established later, will display native flora and fauna and tell the story of the geological and biological significance of the locality in which the park is located. If pertinent, the sociological history of areas will also be portrayed.

RESEARCH BUREAU

Introductory

Early in the biennium the recently created research bureau began to function in co-operation with other divisions of the commission. The bureau consists of a fact-finding group of scientists who serve the state without pay because of their deep interest in conservation problems.

The purpose of the research bureau is to determine causes and seek remedies of any influences which threaten to be detrimental to the wild life and forests of the state. The research bureau is a cooperative body working with other divisions of the conservation commission, with other state departments, and with federal departments in seeking scientific solutions for conservation problems. most of the activities of the research bureau have concerned game problems of the state, particularly of the prairie game birds of the central plains area. Because of the tendency of its early activities, the research bureau has been working more with the game division of the commission than with any other divisions.

Co-operation With Divisions

Among the activities in which the research bureau has been engaged in co-operation with the division of game are:

- 1. Making a game survey of the state in an attempt to determine the relative abundance of the different species of game birds and animals.
- 2. Co-operating with the New England Ruffed Grouse Investigation by supplying its examiners with many specimens and information concerning the ruffed grouse in this state. Findings of the New England Ruffed Grouse Investigation will be of great value in regulating the abundance of the species in Wis-
- 3. Carrying on extensive winter feeding operations. In 1928 three experimental stations were established which were increased to seven in 1929, and to 75 in 1930.

 4. Assisting in duck banding operations in co-operation with the Outagamie Fish and Game Protective Association.
- Experimenting with the propagation of Hungarian partridge, sharp-tailed grouse, and wild turkeys at the state game farm.

In co-operation with the division of forests and parks the research bureau has studied many problems in connection with slash disposal programs, and has contributed to the land economic inventory which is a joint endeavor of the conservation commission and the department of agriculture and markets.

The stomach contents taken from several wolves and other predators have been sent by the research bureau to the federal biological survey for analysis in federal laboratories.

Prairie Chicken Investigation

The largest activity of the research bureau during the biennium has been the prairie chicken investigation which has been carried on under the direction of Dr. Alfred O. Gross of Bowdoin College, Brunswick, Maine, as chief investigator. The investigation was begun in the fall of 1928 when several specimens were sent to Dr. Gross at Bowdoin College where he made a detailed study of the food, parasites, and diseases of 17 prairie chickens and 22 sharp-tailed grouse.



Nest of 11 prairie chicks a few hours old.

In 1929 Dr. Gross worked in Wisconsin for six weeks in June and July, studying the life history of the prairie chicken to determine the factors involved in controlling the number of prairie chickens in Wisconsin.

Photographs and other valuable display material were made during this summer which served to stimulate public interest in the prairie chicken and its conservation.

Dr. Gross spent the entire summer of 1930 working on the prairie chicken in Wisconsin. In addition to many photographs, several thousand feet of movie film were taken showing the nesting activities of the bird. Before leaving Wisconsin, Dr. Gross finished writing a detailed progress report on the prairie chicken investigation, which has been published by the conservation commission and is available to anyone who asks for it.

FINANCIAL STATEMENT

of the

STATE CONSERVATION COMMISSION OF WISCONSIN

Fiscal Years of July 1, 1928 to June 30, 1929 and

July 1, 1929 to June 30, 1930

FIRST YEAR OF BIENNIUM July 1, 1928 to June 30, 1929

OPERATION				
Unexpended balance Disbursements Transferred to Fisheries Unexpended balance	-	89,622.33	\$	4.30 8,145.84 86,472.19
,	\$	39,622.33	\$	89,622.88
ADMINISTRATION				
Unexpended balance		2,488.07		
Appropriation Disbursements Unexpended balance	-	42,933.00	\$	40,290.46 5,180.61
·	\$	45,421.07	\$	45,421.07
Salaries. Supplies Printing Postage Telephone and telegraph State car expense Express, freight and drayage Advertising Insurance Travel expense	-	24,102.84 3,823.83 4,429.81 3,183.73 648.19 348.40 263.41 107.20 49.72 8,338.33	\$	40,290.46
FORESTRY				
Unexpended balance Appropriation Disbursements Unexpended balance	-	21,441.99 67,400.00	\$	85,517.37 3,324.62
	\$	88.841.99	2	88.841.99

DETAIL OF DISBURSEM		3		
Salaries.	-\$	50,468.88		
Travel expense. Printing	-	15,562.50 1,161.88		
		741.75		•
Insurance	-	558.78		
Advertising	-	689.62 471.95		
Express, freight and drayage	-	67.56		
Telephone and telegraphAdvertising. Express, freight and drayage. Supplies.	-	15,799.50		
			\$	85,517.86
			<u> -</u>	00,011.00
PARKS				
	_	0 150 41		
Unexpended balance		8,176.41 28,805.00		
Refund. Disbursements	-	68.00		
Disbursements Uncorporated belongs	•		\$	26,278.56
Unexpended balance			_	765.85
	\$	27,044.41	\$	27,044.41
•	_		_	
DETAIL OF DISBURSEM	enma	1		
Salaries		18,840.53		
Supplies	- -	4,980.82		
Supplies Printing	-	68.25		
Trinding Postage Telephone and telegraph Travel expense. Express, freight and drayage Insurance	-	184.75 114.26		
Travel expense.	-	768.31		
Express, freight and drayage	- 	28.65		
Insurance	-	1,842.99		
			\$	26,278.56
			÷	
DISBURSEMENTS BY PA	nza			
		0 900 40		
Pa-k Administration. Peninsula Park.	-₹	2,828.46 4,891.94		
Devil's Lake Park	-	R.429.68		
Interstate Park	-	8,687.78 787.26		
Nelson Dewey Park Pattison Park Northern Forest Park	-	176.50		
Northern Forest Park	•	8.598.27		
Perrot Park	•	1,148.48		
Brule ParkBelmont Park	•	19.56 36.00		
Tower Hill Park Cushing Memorial Park	:	662.12 92.87		
Cushing Memorial Park		92.87		
Kettle Moraine Park	•	28.64 809.60		
Parks Game Farm	•	141.90		
			_	00.050.50
•			<u>*</u>	26,278.56
WADDING				
WARDENS Unexpended balance	•	42,756.21		
Appropriation	• 2	14,140.00		
Refunds.		410.00	_	
Disbursements			\$	284,140.24
Unexpended balance				28,165.97
•	\$ 2	57,306.21	\$	257,306.21
			_	
DETAIL OF DISBURSEME				
Salaries	\$ 1	41,511.41 72,729.74		
Travel expense		72,729.74 943.52		
Telephone and telegraph. Express, freight and drayage. Advertising.		833.85		
Advertising		1.50		
Insurance		691.17 239.75		
Printing Supplies Sup		590.90		
Supplies		17,098.90		
			5	284,140,24
•			_	,

FISHERIES				
Unexpended balance	-\$	4,190.62		
Appropriation	-	110,614.00		
Appropriation Refund Transferred from Operation	-	749.79 8,145.84		
Disbursements	-	0,140.04	\$	118,700.25
	\$	118,700.25	\$	118,700.25
	_		_	
DETAIL OF DISBURSEM	ENT	' S		
Salaries		62,299.76 17,968.67		
Supplies.	-	23,956.04		
Fish Food Travel expense	-	9 819 70		
Telephone and telegraph	-	1.326.45		
Postage	-	9,819.70 1,326.45 311.95		
Printing	-	122.14		
Express, freight and drayage	-	844.05		
Insurance	-	2,061.49		
			\$	118,700.25
			-	
DISBURSEMENTS BY HATC	HEI	RIES		
Fisheries Administration		7,819.58		
Madison hatchery	-	10,192.22 14,132.33		
Ochkoch hetchery	•	113.56		
Minocoua hatchery	-	3,381.26		
Bayfield hatchery. Oshkosh hatchery. Minocqua hatchery Delafield hatchery	-	2.833.45		
Wild Rose Datchery	_	10.873.32		
Sturgeon Bay hatchery	-	4,018.45 3,761.28		
Sheboygan hatchery	-	3,761.28		
Spooner hatchery	-	54.26		
Eagle River hatchery	-	115.42 812.36		
Tenney Park hatchery	-	18 716 80		
Westfield hatchery	-	13,716.80 3,089.27		
Westfield hatchery Hebron hatchery	-	484.57		
Lakewood hatchery	_	21.92		
Hayward hatchery Osceola hatchery	-	911.81		
Osceola hatchery	-	16,049.63		
Wisconsin Rapids hatchery Eau Claire hatchery	-	975.95		
Eau Claire hatchery	-	2,949.16 2,030.88		
Sparta hatcheryAntigo	-	605.44		
Brule hatchery	-	832.52		
Birchwood hatchery	-	832.52 385.38		
Birchwood hatchery Marinette hatchery	-			
Transportation	-	9,622.88		
Collection of spawn	_	9,424.42		
State fair exhibit	-	42.04		
			\$	118,700.25
REPAIRS AND MAINTENA	ANC			
Unexpended balance	-\$	12,210.88 27,265.00		
Appropriation	-	27,265.00		oe 790 61
Disbursements Unexpended balance	-		ð	26,729.63 12,746.25
	\$	39,475.88	\$	39,475.88
			_	
DETAIL OF DISBURSEME	ENT			
Forestry	-\$	4,699.89		
Parks	-	6,743.08		
Wardens	-	674.18		
Fisheries		14,612.53		
•			\$	26,729.68
			_	

DISBUR	SEMI	PTMS	RV	DARKQ	

DISBURSEMENTS BY PA	RKS	3		
Park Administration Peninsula State Park Devil's Lake State Park Interstate Park Nelson—Dewey Park Pattison State Park Northern Forest State Park Terry Andrae State Park Parks Game Farm Tower Hill State Park	-	383.87 2,158.46 2,944.26 132.28 197.39 35.75 163.45 209.91 152.60 97.47 318.09		
			\$	6,743.03
DISBURSEMENTS BY HATC			<u>-</u>	0,740.00
Madison hatchery Bayfield hatchery	-\$	1,851.80 2,902.24		
Minocqua hatchery Delafield hat:hery	-	99.82		
Wild Rose hatchery Sturgeon Bay hatchery Shebowgan hatchery	-	366.00 1,620.11 55.74 8.85		
Antigo hatchery Eagle River hatchery	-	18.75 147.85		
St. Croix Falls hatchery	_	5,223.21 584.28		
Brule hatchery	_	832.76 300.69		
Hayward hatchery Osceola hatchery	-	883.53		
Transportation Collection of spawn	-	39.67 227.78		
			\$	14,612.53
PROPERTY AND IMPROVE Unexpended balance Appropriation Refund Disbursements	- \$ -	25,880.08 51,150.00 82.00		40 Pro 00
Unexpended balance	-		\$	69,852.88 7,709.70
•	\$	77,062.08	\$	77,062.08
DETAIL OF DISBURSEM	ENT			
Administration Forestry Parks Wardens Fisheries	- \$ -	283.74 15,779.79 19,253.98 9,174.80 24,860.07		
			\$	69,852.38
DISBURSEMENTS BY PA	RKS	,		
Administration—Parks	-\$	417.60		
Peninsula State Park Devil's Lake State Park		3,704.03 2,971.93		
Interstate Park. Nelson Dewey State Park. Pattison State Park. Northern Forest State Park.	-	338.25 144.69		
Pattison State Park				
	-	512 .80		
		512.80 8,189.24 1,435.98		
		512.80 8,189.24 1,435.98 409.20		
		512.80 8,189.24 1,435.98 409.20 311.10 547.36		
Northern Forest State Park Parks Game Farm Tower Hill Park Perrot State Park Terry Andrae State Park Publicity—Parks		512.80 8,189.24 1,435.98 409.20 311.10		19.253.98

·				
DISBURSEMENTS BY HATO Madison hatchery Bayfield hatchery Minocqua hatchery Delafield hatchery Wild Rose hatchery Sturgeon Bay hatchery Eau Claire hatchery Ext. Croix Falls hatchery Westfield hatchery Brule hatchery Brule hatchery Brule hatchery Bruneon hatchery Bruneon hatchery Bruneon hatchery Coscoola hatchery Birchwood hatchery Antigo hatchery Transportation Collection of spawn		81ES 586.50 8.212.50 6.173.80 804.00 5.357.14 857.44 1.00 5.01 5.989.98 71.66 271.50 477.77 661.20 19.11 79.56 242.60	<u>:</u>	24,860.07
BOUNTIES				
Disbursements			-	83,170.00
			<u>.</u>	83,170.00
EMERGENCY FIRE WAR		18	_	
Disbursements			<u>\$</u>	16,119.18
			<u>\$</u>	16,119.13
PARK PURCHASE FUN Unexpended balance Receipts Disbursements Unexpended balance	-\$	6,269.06 4,488.12	\$	40.63 10,716.55
Onceptuos balancos	 •	10,757.18		10,757.18
	<u> </u>		<u> </u>	
LAND AND IMPROVEMENTS—WEST	FIEL	D HATCHE	RY	
Unexpended balance		1,700.00	\$	1,000.00 700.00
	\$	1,700.00	<u>*</u>	1,700.00
STATE PARK RECREAT	TON			
Unexpended balance	-\$	4,555.31		
Receipts. Disbursements.	-	6,115.18	\$	10,474.94
Unexpended balance			_	195.50
	<u>*</u>	10,670.44	<u>*</u>	10,670.44
COPPER FALLS PARI	K			
Unexpended balance	-\$	17,000.00		
Unexpended balance	:		\$	17,000.00
	\$	17,000.00	\$	17,000.00
CLARK-MeNARY FUN	D			
Unexpended balance	-\$	14,719.20 48,859.64		
Receipts Disbursements Unexpended balance	<u>-</u>	20,000.0%	\$	49,662.58 13,416.81
	- •	68,078.84	-	63,078.84
	<u></u>		<u> </u>	

BOAT FUND				
Unexpended balance	\$	8,157.61 1,780.15		
Receipts. Disbursements.		1,780.15	2	1,747.85
Unexpended balance			·	8,289.91
	\$	4,937.76	\$	4,937.76
HATCHERY IN RACINE, WALWORTH O	D WE	NOORA COI	ייינו	v
Unexpended balance		9,978.60	JNI	1
Disbursements		0,0.0.00	\$	745.84
Unexpended balance	·			9,282.76
	\$	9,978.60	\$	9,978.60
ROUGH FISH—NORTHERN		rers		
Unexpended balance	\$	11,207.46		
AppropriationRefund		15,000.00 128.78		
Disbursements. Unexpended balance		2200	\$	6,593.36 19,737.83
Unexpended balance	· -			19,737.83
	\$	26,381.19	\$	26,331.19
HATCHERY—LANGLADE	coui	NTY		
Unexpended balance	\$	4,000.00		4 000 00
Disbursements	·		<u>*</u>	4,000.00
	\$	4,000.00	<u>\$</u>	4,000.00
HATCHERY—FORT ATK	TNIGO	N.		
Unexpended balance		8,000.00		
Disbursements.		0,000.00	\$	3,000.00
	\$	3,000.00	\$	8,000.00
	<u>*</u>	3,000.00	<u>*</u>	8,000.00
FOREST NURSERY	7			
Unexpended balance	3	1,900.12		
Appropriation Disbursements		14,500.00		
Unexpended balance			\$	14,476.92 1,923.20
Oneapended balance				1,920.20
	<u>\$</u>	16,400.12	<u>*</u>	16,400.12
ROUGH FISH—WINNEBAGO) WA	TERS		
Unexpended balance		17 839 74		
Appropriation		20,000.00		
Receipts		2,381.52	8	19,839.58
Unexpended balance			•	20,381.68
	\$	40,171.26	\$	40,171.26
DEMODRATING WINGHERS IN THE COLUMN				
REMODELLING HATCHERY AND ADDITIO			ESTI	TELD
Unexpended balance	\$	8,757.77	s -	3,757.77
		3,757,77	\$	3,757.77
-	<u>-</u>			
HORICON RIVER DA		•		
Unexpended balanceUnexpended balance	\$	10,000.00	_	10 000 00
Onexpended balance			•	10,000.00
	<u>*</u>	10,000.00	\$	10,000.00
HORICON MARSH REA				
Unexpended balance	\$	25,000.00		
AppropriationUnexpended balance		25,000.00	3	50, 000.u0
-			<u>:</u>	
	\$	50,000.00	\$	50,000.00

EMERGENCY APPROPRIATION FROM CONSERVATION FUND

Unexpended balanceUnexpended balance	. \$	67.60	\$ 67. 60
	\$	67.60	\$ 67.60

EMERGENCY APPROPRIATION FROM CONSERVATION FUND

Mississippi Hatchery Sites

Unexpended balance	_ `	20,000.00	\$ 673.64 19, 32 6. 3 6
	\$	20,000.00	\$ 20,000.00

PARK ROADS

THINK HOUSE			
Unexpended balance	\$ 32,338.58		
Appropriation	50,000.00		
Refunds	34.50		
Disbursements		8	49,490.68
Unexpended balance		•	32,882.40
	\$ 82,373.08	\$	82,373.08

RECEIPTS

Non-resident fishing licenses \$ Fish shipping coupons Non-resident hunting licenses	203,813.25 8,889.70 17,225.00
Resident hunting licenses.	185,742.30 184.00
Duplicate licenses Great Lakes fishing licenses	223.00 8,587.45
Mississippi River fishing licenses	2,552.00 51,967.16
Confiscations Warden fees	22,603.14 3,834.62
Trapping licenses.	24,149.43 23,618.74
Deer tags. Set line licenses.	33,574.00 2,955.05 605.00
Guide licenses Nursery Fish dealers' licenses	2,678.65 1,575.00
Clamming licenses Park leases and rentals	1,530.00 4.488.12
Park recreation Fire control (Clark-McNary Fund)	6,115.13 48,359.64
Devil's Lake Boat Fund Removal of rough fish—Winnebago waters	1,780.15 2,331.52
Decoy bands Interest	1,277.70 10,434.47
Refunds Miscellaneous	2.011.95 23,938.12
•	696,994.29

CONSERVATION FUND

Unexpended balance\$	425,267.94
Receipts	684.547.87
Interest on fund	10.434.47
Refunds on disbursements	2.011.95
Disbursements	•
Bounties	
Refunds of receipts	
Unavaonded belongs	

\$ 735,142.60 83,170.00 7,618.61 296,331.02 \$ 1,122,262.23 \$ 1,122,262.23

SECOND YEAR OF BIENNIUM

July 1, 1929 to June 30, 1930

OPERATION				
Unexpended balance.	e	36,472.19		
Transferred to Forestry	· • •	00,112.10	\$	1,141.92
Transferred to Fisheries	-			9,448.87
Unexpended balance	-			25,886.90
	\$	86,472.19	\$	36,472.19
	<u> </u>		<u> </u>	
ADMINISTRATION				
Unexpended balance	\$	5,130.61 57,758.92		
Appropriation Disbursements	-	57,758.92	8	50,690.61
Unexpended balance	· -		•	12,193.92
,				
	\$	62,884.58	\$·	62,884.58
DESCRIPTION DISTRICTOR		~		
DETAIL OF DISBURSEM				
SalariesTravel expense	-\$	80,210.99 5,135.99		
Supplies	_	4,786.80		
Postage. Telephone and telegraph.	_	8.424.75		
Telephone and telegraph	-	422.30		
Express, freight and drayage Printing		169.84 6.869.28		
Advertising	-	6,869.23 32.70		
State Car expense	_	188.01		
			\$	50,690.61
			<u> </u>	
FORESTRY	_			
Unexpended balance	-\$	3,824.62		
Transferred from operation	-	1,141.92 78,750.00		
Refund	-	68.64		
Disbursements	-		8	80,077.42
			•	0 007 76
Unexpended balance			_	3,207.76
Unexpended balance	\$	88,285.18	\$	83,285.18
•	<u> </u>		\$	
DETAIL OF DISBURSEM	ENT	3	\$	
DETAIL OF DISBURSEM	ENT	S 54,350.99	\$	
DETAIL OF DISBURSEM Salaries Travel expense	ENT	54,350.99 11,958.78	\$	
DETAIL OF DISBURSEM Salaries Travel expense Printing Postage	ENT	54,350.99 11,958.78 441.04 60.00	\$	
DETAIL OF DISBURSEM Salaries	ENT	54,350.99 11,958.78 441.04 60.00 781.59	\$	
Salaries. Travel expense Printing Postage Insurance Telephone and telegraph	ENT:	54,350.99 11,958.78 441.04 60.00 781.59 1,097.14	\$	
DETAIL OF DISBURSEM: Salaries. Travel expense. Printing. Postage. Insurance Telephone and telegraph. Advertising.	ENT:	54,350.99 11,958.78 441.04 60.00 781.59 1,097.14 80.90 148.77	\$	
Salaries. Travel expense Printing Postage Insurance Telephone and telegraph	ENT:	54,350.99 11,958.78 441.04 60.00 781.59	\$	
DETAIL OF DISBURSEM Salaries Travel expense Printing Postage Insurance Telephone and telegraph Advertising Express, freight and drayage	ENT:	54,350.99 11,958.78 441.04 60.00 781.59 1,097.14 80.90 148.77	\$	83,285.18
Salaries. Travel expense. Printing. Postage. Insurance Telephone and telegraph. Advertising. Express, freight and drayage. Supplies.	ENT:	54,350.99 11,958.78 441.04 60.00 781.59 1,097.14 80.90 148.77		
DETAIL OF DISBURSEM Travel expense Printing Postage Insurance Telephone and telegraph Advertising Express, freight and drayage Supplies PARKS	ENT:	54,350.99 11,958.78 441.04 60.00 781.59 1,097.14 80.90 148.77 11,158.21		83,285.18
DETAIL OF DISBURSEM Salaries	ENT:	5 54,350.99 11,958.78 441.04 60.00 781.59 1,097.14 80.90 148.77 11,158.21		83,285.18
DETAIL OF DISBURSEM Salaries Travel expense Printing Postage Insurance Telephone and telegraph Advertising Express, freight and drayage Supplies PARKS Unexpended balance Appropriation Disbursements	ENT:	54,350.99 11,958.78 441.04 60.00 781.59 1,097.14 80.90 148.77 11,158.21		83,285.18 80,077.42 23,027.55
DETAIL OF DISBURSEM: Salaries. Travel expense. Printing Postage. Insurance Telephone and telegraph. Advertising. Express, freight and drayage. Supplies. PARKS Unexpended balance.	ENT:	5 54,350.99 11,958.78 441.04 60.00 781.59 1,097.14 80.90 148.77 11,158.21	\$	83,285.18 80,077.42
DETAIL OF DISBURSEM Salaries Travel expense Printing Postage Insurance Telephone and telegraph Advertising Express, freight and drayage Supplies PARKS Unexpended balance Appropriation Disbursements	ENT:	5 54,350.99 11,958.78 441.04 60.00 781.59 1,097.14 80.90 148.77 11,158.21 765.85 35,815.00	\$	83,285.18 80,077.42 23,027.55
DETAIL OF DISBURSEM Salaries Travel expense Printing Postage Insurance Telephone and telegraph Advertising Express, freight and drayage Supplies PARKS Unexpended balance Appropriation Disbursements	ENT:	5 54,350.99 11,958.78 441.04 60.00 781.59 1,097.14 80.90 148.77 11,158.21	\$	80,077.42 23,027.55 13,553.30
DETAIL OF DISBURSEM Salaries Travel expense Printing Postage Insurance Telephone and telegraph Advertising Express, freight and drayage Supplies PARKS Unexpended balance Appropriation Disbursements	ENT:	5 54,350.99 11,958.78 441.04 60.00 781.59 1,097.14 80.90 148.77 11,158.21 765.85 35,815.00	\$	80,077.42 23,027.55 13,553.30
Salaries DETAIL OF DISBURSEM Travel expense Printing Postage Insurance Telephone and telegraph Advertising Express, freight and drayage Supplies PARKS Unexpended balance Appropriation Disbursements Unexpended balance DETAIL OF DISBURSEM Salaries	**************************************	\$ 54,350.99	\$	80,077.42 23,027.55 13,553.30
Salaries. Travel expense. Printing. Postage. Insurance Telephone and telegraph. Advertising. Express, freight and drayage. Supplies. PARKS Unexpended balance. Appropriation. Disbursements. Unexpended balance. DETAIL OF DISBURSEM: Salaries. Supplies.	S S ENTS	5 54,350.99 11,958.78 441.04 60.00 781.59 1,097.14 80.90 148.77 11,158.21 765.85 35,815.00 36,580.85	\$	80,077.42 23,027.55 13,553.30
DETAIL OF DISBURSEM Salaries	-\$	\$ 54,350.99	\$	80,077.42 23,027.55 13,553.30
DETAIL OF DISBURSEM Salaries. Travel expense. Printing. Postage. Insurance Telephone and telegraph. Advertising. Express, freight and drayage. Supplies. PARKS Unexpended balance. Appropriation. Disbursements. Unexpended balance. DETAIL OF DISBURSEM Salaries. Supplies. Travel expense. Telephone and telegraph. Postage	\$ = = = = = = = = = = = = = = = = = = =	5 54,350.99 11,958.78 441.04 60.00 781.59 1,097.14 80.90 148.77 11,158.21 765.85 35,815.00 36,580.85 8 18,158.49 2,673.32 757.06 197.18 50.00	\$	80,077.42 23,027.55 13,553.30
Salaries. Travel expense Printing. Postage. Insurance Telephone and telegraph Advertising. Express, freight and drayage. Supplies. PARKS Unexpended balance. Appropriation. Disbursements. Unexpended balance. DETAIL OF DISBURSEM Salaries. Supplies. Travel expense. Travel expense. Telephone and telegraph. Postage. Printing.	S S S S S	\$ 54,350.99 11,958.78 441.04 60.00 781.59 1,097.14 80.90 148.77 11,158.21 765.85 35,816.00 36,580.85 8 18,158.49 2,673.32 757.06 197.18 50.00 37.64	\$	80,077.42 23,027.55 13,553.30
Salaries. Travel expense. Printing. Postage. Insurance Telephone and telegraph. Advertising. Express, freight and drayage. Supplies. PARKS Unexpended balance. Appropriation. Disbursements. Unexpended balance. DETAIL OF DISBURSEM: Salaries. Supplies. Travel expense. Telephone and telegraph. Postage. Printing. Express, freight and drayage.	-\$	5 54,350.99 11,958.78 441.04 60.00 781.59 1,097.14 80.90 148.77 11,158.21 765.85 35,815.00 36,580.85 8 18,158.49 2,673.32 757.06 197.18 50.00 37.64 22.00	\$	80,077.42 23,027.55 13,553.30
DETAIL OF DISBURSEM Salaries. Travel expense Printing Postage Insurance Telephone and telegraph Advertising Express, freight and drayage Supplies PARKS Unexpended balance Appropriation Disbursements Unexpended balance Disbursements Telephone and telegraph Salaries Supplies DETAIL OF DISBURSEM Salaries Travel expense Telephone and telegraph Postage Printing Express, freight and drayage Advertising	SENTS	\$ 54,350.99 11,958.78 441.04 60.00 781.59 1,097.14 80.90 148.77 11,158.21 765.85 35,815.00 36,580.85 8 18,158.49 2,673.32 757.06 197.18 50.00 37.64 22.00 2.40	\$	80,077.42 23,027.55 13,553.30
Salaries. Travel expense. Printing. Postage. Insurance Telephone and telegraph. Advertising. Express, freight and drayage. Supplies. PARKS Unexpended balance. Appropriation. Disbursements. Unexpended balance. DETAIL OF DISBURSEM: Salaries. Supplies. Travel expense. Telephone and telegraph. Postage. Printing. Express, freight and drayage.	SENTS	5 54,350.99 11,958.78 441.04 60.00 781.59 1,097.14 80.90 148.77 11,158.21 765.85 35,815.00 36,580.85 8 18,158.49 2,673.32 757.06 197.18 50.00 37.64 22.00	\$	80,077.42 23,027.55 13,553.30

DISBURSEMENTS BY PA	RKS	
Parks administration.	\$ 2,907.18	
Peninsula State Park	5,852.26	
Peninsula State Park Devil's Lake State Park	6 814 28	
Interstate Park	2,059.12	•
Nelson Dewey State Park	498.17	
Interstate Park Nelson Dewey State Park Pattison State Park Northern Forest State Park	27.12	
Town Andrea State Park	300.00	
Terry Andrae State ParkBrule State Park.	2,891.47 80.78	
Belmont State Park	69.16	
Tames Hill Glade Desi-	EOE 06	
Perrot State Park. Cushing Memorial State Park. Potowatomi State Park. Copper Falls State Park.	667.09	
Cushing Memorial State Park	112.77	
Potowatomi State Park	7.80	
Copper Falls State Park	265.09	
••		
		\$ 23,0 2 7.55
WARDENS		
Unexpended balance	\$ 28,165.97	
Appropriation	286.518.96	•
Disbursements		\$ 229,593.76
Disbursements Unexpended balance		30,086.17
	\$ 259,679.93	\$ 259,679.98
DEMAIL OF DISCUSSIONE	NTMG	
DETAIL OF DISBURSEME		
SalariesTravel expense	\$ 142,578.19	
Travel expense	75,646.96	
Advertising	. 239.30	
Supplies Telephone and telegraph Express, freight and drayage	8,429.14	
Telephone and telegraph.	1,104.29 752.77	
Express, freight and drayage	752.77	
Postage	100.00	
Printing	279.15	
Insurance.	648.96	
		\$. 229,593.76
FISHERIES		\$. 229,593.76
	* 183 174 00	\$. 229,593.76
Appropriation	\$ 183,174.00 9 443.87	\$. 229,093.76
Appropriation Transferred from Operation	. 9,443.87	\$. 229,093.76
Appropriation Transferred from Operation Refunds	. 9,443.87 . 299.60	
Appropriation	. 9,443.87 . 299.60	\$ 151,946.98
Appropriation Transferred from Operation Refunds	9,443.87	\$ 151,946.98 40,969.99
Appropriation	. 9,443.87 . 299.60	\$ 151,946.98
Appropriation	9,443.87	\$ 151,946.98 40,969.99
Appropriation	9,443.87 299.60 \$ 192,916.97	\$ 151,946.98 40,969.99
Appropriation	9,443.87 299.60 \$ 192,916.97	\$ 151,946.98 40,969.99
Appropriation Transferred from Operation Refunds Disbursements Unexpended balance DETAIL OF DISBURSEME Salaries	\$ 192,916.97	\$ 151,946.98 40,969.99
Appropriation	\$ 192,916.97 SNTS \$ 84,481.03 24.866.69	\$ 151,946.98 40,969.99
Appropriation	\$ 192,916.97 SNTS \$ 84,481.03 24.866.69	\$ 151,946.98 40,969.99
Appropriation	\$ 192,916.97 SNTS \$ 84,481.03 24.866.69	\$ 151,946.98 40,969.99
Appropriation Transferred from Operation Refunds Disbursements Unexpended balance DETAIL OF DISBURSEME Salaries Supplies Fish food Travel expense Telephone and telegraph	\$ 192,916.97 SNTS \$ 44,481.03 24,866.69 25,117.10 12,931.52 1,189.87	\$ 151,946.98 40,969.99
Appropriation Transferred from Operation Refunds Disbursements Unexpended balance DETAIL OF DISBURSEME Salaries Supplies Fish food Travel expense Telephone and telegraph Postage	\$ 192,916.97 CNTS \$ 84,481.03 24,886.69 25,117.10 12,931.52 1,189.87 90.00	\$ 151,946.98 40,969.99
Appropriation Transferred from Operation Refunds Disbursements Unexpended balance DETAIL OF DISBURSEME Salaries Supplies Fish food Travel expense Telephone and telegraph Postage	\$ 192,916.97 CNTS \$ 84,481.03 24,886.69 25,117.10 12,931.52 1,189.87 90.00	\$ 151,946.98 40,969.99
Appropriation Transferred from Operation Refunds Diabursements Unexpended balance DETAIL OF DISBURSEME Salaries Supplies Fish food Travel expense Telephone and telegraph Postage Printing Express, freight and drayage	\$ 192,916.97 \$ 192,916.97 INTS \$ 84,481.03 24,866.69 25,117.10 12,931.52 1,189.87 90.00 444.99 930.88	\$ 151,946.98 40,969.99
Appropriation	\$ 192,916.97 \$ 192,916.97 ENTS \$ 84,481.03 24,866.69 25,117.189.87 90.00 444.99 930.88 354.90	\$ 151,946.98 40,969.99
Appropriation Transferred from Operation Refunds Diabursements Unexpended balance DETAIL OF DISBURSEME Salaries Supplies Fish food Travel expense Telephone and telegraph Postage Printing Express, freight and drayage	\$ 192,916.97 ENTS \$ 84,481.03 24,866.69 25,117.19 11,89.87 90.00 444.99 930.88 354.90	\$ 151,946.98 40,969.99
Appropriation Transferred from Operation Refunds Disbursements Unexpended balance DETAIL OF DISBURSEME Salaries Supplies Fish food Travel expense Telephone and telegraph Postage Express, freight and drayage Advertising	\$ 192,916.97 \$ 192,916.97 ENTS \$ 84,481.03 24,866.69 25,117.189.87 90.00 444.99 930.88 354.90	\$ 151,946.98 40,969.99 \$ 192,916.97
Appropriation	\$ 192,916.97 \$ 192,916.97 ENTS \$ 84,481.03 24,866.69 25,117.189.87 90.00 444.99 930.88 354.90	\$ 151,946.98 40,969.99
Appropriation Transferred from Operation Refunds Disbursements Unexpended balance DETAIL OF DISBURSEME Salaries Supplies Fish food Travel expense Telephone and telegraph Postage Printing Express, freight and drayage Advertising Insurance	\$ 192,916.97 ENTS \$ 84,481.03 24,866.69 25,117.01 12,931.52 1,189.87 90.00 444.99 930.88 354.90 1,540.00	\$ 151,946.98 40,969.99 \$ 192,916.97
Appropriation	\$ 192,916.97 ENTS \$ 84,481.03 24,866.69 25,117.01 12,931.52 1,189.87 90.00 444.99 930.88 354.90 1,540.00	\$ 151,946.98 40,969.99 \$ 192,916.97
Appropriation Transferred from Operation Refunds Diabursements Unexpended balance DETAIL OF DISBURSEME Salaries Supplies Fish food Travel expense Telephone and telegraph Postage Printing Express, freight and drayage Advertising Insurance DISBURSEMENTS BY HATC	\$ 192,916.97 SNTS \$ 84,481.03 24,866.69 25,117.10 12,931.52 1,189.87 90.00 444.99 930.88 354.90 1,540.00 HERIES \$ 10.951.21	\$ 151,946.98 40,969.99 \$ 192,916.97
Appropriation Transferred from Operation Refunds Disbursements Unexpended balance DETAIL OF DISBURSEME Salaries Supplies Fish food Travel expense Telephone and telegraph Postage Printing Express, freight and drayage Advertising Insurance DISBURSEMENTS BY HATC Fisheries administration Madison hatchery	\$ 192,916.97 SNTS \$ 84,481.03 24,866.69 25,117.19 1,189.87 90.00 444.99 930.88 354.90 1,540.00 HERIES \$ 10,951.21 9.952.89	\$ 151,946.98 40,969.99 \$ 192,916.97
Appropriation Transferred from Operation Refunds Disbursements Unexpended balance DETAIL OF DISBURSEME Salaries Supplies Fish food Travel expense Telephone and telegraph Postage Printing Express, freight and drayage Advertising Insurance DISBURSEMENTS BY HATC Fisheries administration Madison hatchery	\$ 192,916.97 SNTS \$ 84,481.03 24,866.69 25,117.19 1,189.87 90.00 444.99 930.88 354.90 1,540.00 HERIES \$ 10,951.21 9.952.89	\$ 151,946.98 40,969.99 \$ 192,916.97
Appropriation Transferred from Operation Refunds Disbursements Unexpended balance DETAIL OF DISBURSEME Salaries Supplies Fish food Travel expense Telephone and telegraph Postage Printing Express, freight and drayage Advertising Insurance DISBURSEMENTS BY HATC Fisheries administration Madison hatchery	\$ 192,916.97 SNTS \$ 84,481.03 24,866.69 25,117.19 1,189.87 90.00 444.99 930.88 354.90 1,540.00 HERIES \$ 10,951.21 9.952.89	\$ 151,946.98 40,969.99 \$ 192,916.97
Appropriation Transferred from Operation Refunds Disbursements Unexpended balance DETAIL OF DISBURSEME Salaries Supplies Fish food Travel expense Telephone and telegraph Postage Printing Express, freight and drayage Advertising Insurance DISBURSEMENTS BY HATC Fisheries administration Madison hatchery	\$ 192,916.97 SNTS \$ 84,481.03 24,866.69 25,117.19 1,189.87 90.00 444.99 930.88 354.90 1,540.00 HERIES \$ 10,951.21 9.952.89	\$ 151,946.98 40,969.99 \$ 192,916.97
Appropriation Transferred from Operation Refunds Disbursements Unexpended balance DETAIL OF DISBURSEME Salaries Supplies Fish food Travel expense Telephone and telegraph Postage Printing Express, freight and drayage Advertising Insurance DISBURSEMENTS BY HATC Fisheries administration Madison hatchery Bayfield hatchery Delafield hatchery Utild Rese betsherie	\$ 192,916.97 SNTS \$ 84,481.03 24,886.69 25,117.10 12,931.52 1,189.87 90.00 444.99 930.88 354.90 1,540.00 HERIES \$ 10,951.21 9,952.89 15,995.89 15,995.89 15,995.89 15,995.89	\$ 151,946.98 40,969.99 \$ 192,916.97
Appropriation Transferred from Operation Refunds Disbursements Unexpended balance DETAIL OF DISBURSEME Salaries Supplies Fish food Travel expense Telephone and telegraph Postage Printing Express, freight and drayage Advertising Insurance DISBURSEMENTS BY HATC Fisheries administration Madison hatchery Bayfield hatchery Delafield hatchery Utild Rese betsherie	\$ 192,916.97 SNTS \$ 84,481.03 24,886.69 25,117.10 12,931.52 1,189.87 90.00 444.99 930.88 354.90 1,540.00 HERIES \$ 10,951.21 9,952.89 15,995.89 15,995.89 15,995.89 15,995.89	\$ 151,946.98 40,969.99 \$ 192,916.97
Appropriation Transferred from Operation Refunds Disbursements Unexpended balance DETAIL OF DISBURSEME Salaries Supplies Fish food Travel expense Telephone and telegraph Postage Printing Express, freight and drayage Advertising Insurance DISBURSEMENTS BY HATC Fisheries administration Madison hatchery Bayfield hatchery Delafield hatchery Utild Rese betsherie	\$ 192,916.97 SNTS \$ 84,481.03 24,886.69 25,117.10 12,931.52 1,189.87 90.00 444.99 930.88 354.90 1,540.00 HERIES \$ 10,951.21 9,952.89 15,995.89 15,995.89 15,995.89 15,995.89	\$ 151,946.98 40,969.99 \$ 192,916.97 \$ 151,946.98
Appropriation Transferred from Operation Refunds Disbursements Unexpended balance DETAIL OF DISBURSEME Salaries Supplies Fish food Travel expense Telephone and telegraph Postage Printing Express, freight and drayage Advertising Insurance DISBURSEMENTS BY HATC Fisheries administration Madison hatchery Bayfield hatchery Delafield hatchery Utild Rese betsherie	\$ 192,916.97 SNTS \$ 84,481.03 24,886.69 25,117.10 12,931.52 1,189.87 90.00 444.99 930.88 354.90 1,540.00 HERIES \$ 10,951.21 9,952.89 15,995.89 15,995.89 15,995.89 15,995.89	\$ 151,946.98 40,969.99 \$ 192,916.97 \$ 151,946.98
Appropriation Transferred from Operation Refunds Disbursements Unexpended balance DETAIL OF DISBURSEME Salaries Supplies Fish food Travel expense Telephone and telegraph. Postage Printing Express, freight and drayage Advertising Insurance. DISBURSEMENTS BY HATC Fisheries administration Madison hatchery Bayfield hatchery Minocqua hatchery Wild Rose hatchery Sturgeon Bay hatchery Sturgeon Bay hatchery Speboygan hatchery Speboygan hatchery Speboygan hatchery Speooner hatchery Spooner hatchery Spooner hatchery Spooner hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery	\$ 192,916.97 \$ 192,916.97 INTS \$ 84,481.03 24,866.69 25,117.10 12,931.52 1,189.87 90.00 444.99 930.88 354.90 1,540.00 HERIES \$ 10,951.21 9,952.89 15,895.86 8,417.89 5,686.89 12,774.61 6,162.75 8,935.03 92.18 206.70	\$ 151,946.98 40,969.99 \$ 192,916.97 \$ 151,946.98
Appropriation Transferred from Operation Refunds Disbursements Unexpended balance DETAIL OF DISBURSEME Salaries Supplies Fish food Travel expense Telephone and telegraph Postage Printing Express, freight and drayage Advertising Insurance DISBURSEMENTS BY HATC Fisheries administration Madison hatchery Bayfield hatchery Delafield hatchery Wild Rose hatchery Sturgeon Bay hatchery Sheboygan hatchery Spooner hatchery Eagle River hatchery Eagle River hatchery Eagle River hatchery Tenney Park hatchery Tenney Park hatchery Tenney Park hatchery	\$ 192,916.97 \$ 192,916.97 ENTS \$ 84,481.03 24,886.69 25,117.10 12,931.52 1,189.87 90.00 444.99 980.88 354.90 1,540.00 HERIES \$ 10,951.21 9,952.89 15,985.89 15,895.68 417.89 5,565.02 12,774.61 5,162.75 3,985.03 92.18 206.70 71.80	\$ 151,946.98 40,969.99 \$ 192,916.97 \$ 151,946.98
Appropriation Transferred from Operation Refunds Diabursements Unexpended balance DETAIL OF DISBURSEME Salaries Supplies Fish food Travel expense Telephone and telegraph Postage Printing Express, freight and drayage Advertising Insurance. DISBURSEMENTS BY HATC Fisheries administration Madison hatchery Bayfield hatchery Wild Rose hatchery Sheboygan hatchery Sheboygan hatchery Spooner hatchery Spooner hatchery Eagle River hatchery Tenney Park hatchery Tenney Park hatchery Tenney Park hatchery Tenney Park hatchery Tenney Park hatchery Tenney Park hatchery Tenney Park hatchery Tenney Park hatchery Tenney Park hatchery Tenney Park hatchery Tenney Park hatchery Tenney Fark hatchery Tenney Fark hatchery Tenney Fark hatchery Tenney Fark hatchery Tenney Fark hatchery Tenney Fark hatchery Tenney Fark hatchery Tenney Fark hatchery Tenney Fark hatchery Tenney Fark hatchery	\$ 192,916.97 \$ 192,916.97 INTS \$ 84,481.03 24,886.90 25,117.10 12,931.52 1,189.87 90.00 444.99 930.88 354.90 1,540.00 HERIES \$ 10,951.21 - 9,952.89 15,895.86 8,417.89 15,895.86 8,417.89 15,895.86 15,162.75 8,935.03 92.18 206.70 71.80	\$ 151,946.98 40,969.99 \$ 192,916.97 \$ 151,946.98
Appropriation Transferred from Operation Refunds Disbursements Unexpended balance DETAIL OF DISBURSEME Salaries Supplies Fish food Travel expense Telephone and telegraph. Postage Printing Express, freight and drayage Advertising Insurance. DISBURSEMENTS BY HATC Fisheries administration Madison hatchery Bayfield hatchery Minocqua hatchery Wild Rose hatchery Sturgeon Bay hatchery Sturgeon Bay hatchery Speboygan hatchery Speboygan hatchery Speboygan hatchery Speooner hatchery Spooner hatchery Spooner hatchery Spooner hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery Spelse River hatchery	\$ 192,916.97 \$ 192,916.97 INTS \$ 84,481.03 24,866.69 25,117.10 12,931.52 1,189,87 90.00 444.99 930.88 354.90 1,540.00 HERIES \$ 10,951.21 9,952.86 8,417.89 15,895.86 8,417.89 15,774.61 5,162.75 8,935.03 92.18 206.70 71.80 12,138.65 5,782.61	\$ 151,946.98 40,969.99 \$ 192,916.97 \$ 151,946.98

BIENNIAL REPORT

Hayward hatchery Oscoola hatchery Wisconsin Rapids hatchery Eau Claire hatchery Sparta hatchery Burlington hatchery Hebron hatchery Brule hatchery Brule hatchery Birchwood hatchery State Fair Exhibit Transportation Collection of spawn	- - - - - - - - - - - - - -	1,519.72 17,149.80 1,554.09 4,310.93 2,495.75 50.22 3,737.32 419.96 1,849.44 78.38 80.50 11,921.05	<u>s</u>	151,946.98
FIELD INVESTIGATO		0 000 00		
Appropriation		3,900.00	\$	902.19
Disbursements	-		4	2.997.81
			_	
	\$	3,900.00	\$	8,900.00
			_	
DETAIL OF DISBURSEM	ENTS	,		
Salaries		232.40		
Travel expense	- •	645.50 22.84		
ouppites	-	22.84		
Insurance	-	1.95		
			\$	902.19
			*	302.13
GAME FARM				
Appropriation		37,405.00		
Appropriation Disbursements	-	0,,200,00	\$	82,878.41
Unexpended balance	-		•	5,026.59
			_	
	\$	87,405.00	\$	87,405.00
DETAIL OF DISBURSEM! Salaries. Travel expense. Supplies. Printing Postage. Telephone and telegraph. Express, freight and drayage. Insurance.	-\$ - -	13,687.61 7,274.69 10,773.06 148.23 117.46 151.85 253.31 22.20		82,378.41
Salaries. Travel expense. Supplies.	-\$ - -	13,637.61 7,274.69 10,778.06 148.28 117.46 151.85	<u>.</u>	82,378.41
Salaries Travel expense Supplies Printing Printing Postage Telephone and telegraph Express, freight and drayage Insurance	-\$	13,687.61 7,274.69 10,773.06 148.23 117.46 151.85 253.31 22.20	<u>*</u>	82,378.41
Salaries Travel expense Supplies Printing Postage Telephone and telegraph Express, freight and drayage Insurance EDUCATION AND PUBLIC.	-\$ - - - - - - - - - - - - - - - - - -	13,687.61 7,274.69 10,778.06 148.28 117.46 151.85 253.31 22.20	<u>.</u>	82,378.41
Salaries Travel expense Supplies Printing Postage Telephone and telegraph Express, freight and drayage Insurance EDUCATION AND PUBLIC.	-\$ - - - - - - - - - - - - - - - - - -	13,687.61 7,274.69 10,773.06 148.23 117.46 151.85 253.31 22.20	<u>:</u>	
Salaries Travel expense Supplies Printing Postage Telephone and telegraph Express, freight and drayage Insurance EDUCATION AND PUBLIC.	-\$ - - - - - - - - - - - - - - - - - -	13,687.61 7,274.69 10,778.06 148.28 117.46 151.85 253.31 22.20	<u>s</u>	32,378.41 9,349.17 6,609.07
Salaries Travel expense Supplies Printing Postage Telephone and telegraph Express, freight and drayage Insurance EDUCATION AND PUBLIC. Appropriation Disbursements	-\$ -	13,687.61 7,274.69 10,778.06 148.28 117.46 151.85 253.31 22.20 NS 15,958.24		9,849.17 6,609.07
Salaries Travel expense Supplies Printing Postage Telephone and telegraph Express, freight and drayage Insurance EDUCATION AND PUBLIC. Appropriation Disbursements	-\$ - - - - - - - - - - - - - - - - - -	13,687.61 7,274.69 10,778.06 148.28 117.46 151.85 253.31 22.20	*	9,849.17
Salaries Travel expense Supplies Printing Postage Telephone and telegraph Express, freight and drayage Insurance EDUCATION AND PUBLIC. Appropriation Disbursements Unexpended balance	-\$ -	13,687.61 7,274.69 10,778.06 1148.23 117.46 151.85 253.31 22.20 NS 16,958.24		9,849.17 6,609.07
Salaries Travel expense Supplies Printing Postage Telephone and telegraph Express, freight and drayage Insurance EDUCATION AND PUBLIC. Appropriation Disbursements	-\$ -	13,687.61 7,274.69 10,778.06 1148.23 117.46 151.85 253.31 22.20 NS 16,958.24		9,849.17 6,609.07
Salaries Travel expense Supplies Printing Prostage Telephone and telegraph Express, freight and drayage Insurance EDUCATION AND PUBLIC Appropriation Disbursements Unexpended balance DETAIL OF DISBURSEMI	-\$ 	13,687.61 7,274.69 10,778.06 148.28 117.46 151.85 253.31 22.20 NS 15,958.24		9,849.17 6,609.07
Salaries Travel expense Supplies Printing Postage Telephone and telegraph Express, freight and drayage Insurance EDUCATION AND PUBLIC. Appropriation Disbursements Unexpended balance DETAIL OF DISBURSEMI Salaries Travel expense	ATIO	13,687.61 7,274.69 10,778.06 1148.23 117.46 151.85 258.31 22.20 NS 15,958.24		9,849.17 6,609.07
Salaries Travel expense Supplies Printing Postage Telephone and telegraph Express, freight and drayage Insurance EDUCATION AND PUBLIC Appropriation Disbursements Unexpended balance DETAIL OF DISBURSEMI Salaries Travel expense Supplies	-\$ -	13,687.61 7,274.69 10,778.06 1148.23 117.46 151.85 258.31 22.20 NS 15,958.24		9,849.17 6,609.07
Salaries Travel expense Supplies Printing Postage Telephone and telegraph Express, freight and drayage Insurance EDUCATION AND PUBLIC Appropriation Disbursements Unexpended balance DETAIL OF DISBURSEMI Salaries Travel expense Supplies	-\$ -	13,687.61 7,274.69 10,778.06 148.23 117.46 151.85 253.31 22.20 NS 15,958.24 15,958.24 1,692.51 2,893.46 174.77		9,849.17 6,609.07
Salaries Travel expense Supplies Printing Postage Telephone and telegraph Express, freight and drayage Insurance EDUCATION AND PUBLIC Appropriation Disbursements Unexpended balance DETAIL OF DISBURSEMI Salaries Travel expense Supplies Printing Postage	-\$ 	13,687.61 7,274.69 10,778.06 1148.28 117.46 161.85 258.31 22.20 NS 15,958.24 15,958.24 1,692.51 2,893.45 174.77 669.04		9,849.17 6,609.07
Salaries Travel expense Supplies Printing Postage Telephone and telegraph Express, freight and drayage Insurance EDUCATION AND PUBLIC Appropriation Disbursements Unexpended balance DETAIL OF DISBURSEMI Salaries Travel expense Supplies Printing Postage	-\$ 	13,687.61 7,274.69 10,778.06 148.28 117.46 6151.85 258.31 22.20 NS 15,958.24 15,958.24 3,798.63 1,692.51 2,898.45 174.77 669.04 101.61		9,849.17 6,609.07
Salaries Travel expense Supplies Printing Postage Telephone and telegraph Express, freight and drayage Insurance EDUCATION AND PUBLIC Appropriation Disbursements Unexpended balance DETAIL OF DISBURSEMI Salaries Travel expense Supplies	-\$ 	13,687.61 7,274.69 10,778.06 1148.28 117.46 161.85 258.31 22.20 NS 15,958.24 15,958.24 1,692.51 2,893.45 174.77 669.04	* -	9,849.17 6,609.07 15,958.24
Salaries Travel expense Supplies Printing Postage Telephone and telegraph Express, freight and drayage Insurance EDUCATION AND PUBLIC Appropriation Disbursements Unexpended balance DETAIL OF DISBURSEMI Salaries Travel expense Supplies Printing Postage	-\$ 	13,687.61 7,274.69 10,778.06 148.28 117.46 6151.85 258.31 22.20 NS 15,958.24 15,958.24 3,798.63 1,692.51 2,898.45 174.77 669.04 101.61		9,849.17 6,609.07
Salaries Travel expense Supplies Printing Postage Telephone and telegraph Express, freight and drayage Insurance EDUCATION AND PUBLIC Appropriation Disbursements Unexpended balance DETAIL OF DISBURSEMI Salaries Travel expense Supplies Printing Postage	-\$ 	13,687.61 7,274.69 10,778.06 148.28 117.46 6151.85 258.31 22.20 NS 15,958.24 15,958.24 3,798.63 1,692.51 2,898.45 174.77 669.04 101.61	* -	9,849.17 6,609.07 15,958.24
Salaries Travel expense Supplies Printing Postage Telephone and telegraph Express, freight and drayage Insurance EDUCATION AND PUBLIC. Appropriation Disbursements Unexpended balance DETAIL OF DISBURSEMI Salaries Travel expense Supplies Printing Postage Telephone and telegraph Drayage	ATIO	13,687.61 7,274.69 10,778.06 148.28 117.46 6151.85 258.31 22.20 NS 15,958.24 15,958.24 3,798.63 1,692.51 2,898.45 174.77 669.04 101.61	* -	9,849.17 6,609.07 15,958.24
Salaries Travel expense Supplies Printing Postage Telephone and telegraph Express, freight and drayage Insurance EDUCATION AND PUBLIC. Appropriation Disbursements Unexpended balance DETAIL OF DISBURSEMI Salaries Travel expense Supplies Printing Postage Telephone and telegraph Drayage RESEARCH BUREAU	-\$	13,687.61 7,274.69 10,778.06 117.78.06 117.80 117.80 151.85 253.31 22.20 NS 16,958.24 15,958.24 15,958.24 16,92.51 2,893.46 174.77 669.04 101.61 24.16	* -	9,849.17 6,609.07 15,958.24
Salaries Travel expense Supplies Printing Postage Telephone and telegraph Express, freight and drayage Insurance EDUCATION AND PUBLIC Appropriation Disbursements Unexpended balance DETAIL OF DISBURSEMI Salaries Travel expense Supplies Printing Postage Telephone and telegraph Drayage RESEARCH BUREAU	-\$	13,687.61 7,274.69 10,778.06 148.28 117.46 6151.85 258.31 22.20 NS 15,958.24 15,958.24 3,798.63 1,692.51 2,898.45 174.77 669.04 101.61	* * * * * * * * * * * * * * * * * * * *	9,849.17 6,609.07 15,958.24 9,349.17
Salaries Travel expense Supplies Printing Postage Telephone and telegraph Express, freight and drayage Insurance EDUCATION AND PUBLIC. Appropriation Disbursements Unexpended balance DETAIL OF DISBURSEMI Salaries Travel expense Supplies Printing Postage Telephone and telegraph Drayage RESEARCH BUREAU Appropriation Disbursements	-\$	13,687.61 7,274.69 10,778.06 117.78.06 117.80 117.80 151.85 253.31 22.20 NS 16,958.24 15,958.24 15,958.24 16,92.51 2,893.46 174.77 669.04 101.61 24.16	* -	9,849.17 6,609.07 15,958.24 9,349.17
Salaries Travel expense Supplies Printing Postage Telephone and telegraph Express, freight and drayage Insurance EDUCATION AND PUBLIC Appropriation Disbursements Unexpended balance DETAIL OF DISBURSEMI Salaries Travel expense Supplies Printing Postage Telephone and telegraph Drayage RESEARCH BUREAU	-\$	13,687.61 7,274.69 10,778.06 117.78.06 117.80 117.80 151.85 253.31 22.20 NS 16,958.24 15,958.24 15,958.24 16,92.51 2,893.46 174.77 669.04 101.61 24.16	* * * * * * * * * * * * * * * * * * * *	9,849.17 6,609.07 15,958.24 9,349.17 1,350.24 6,749.76
Salaries Travel expense Supplies Printing Postage Telephone and telegraph Express, freight and drayage Insurance EDUCATION AND PUBLIC. Appropriation Disbursements Unexpended balance DETAIL OF DISBURSEMI Salaries Travel expense Supplies Printing Postage Telephone and telegraph Drayage RESEARCH BUREAU Appropriation Disbursements	-\$	13,687.61 7,274.69 10,778.06 117.78.06 117.80 117.80 151.85 253.31 22.20 NS 16,958.24 15,958.24 15,958.24 16,92.51 2,893.46 174.77 669.04 101.61 24.16	* * * * * * * * * * * * * * * * * * * *	9,849.17 6,609.07 15,958.24 9,349.17

DETAIL OF DISBURSEMENTS 208.32 Travel expense 596.01 Supplies 537.83 Printing 8.58
Tavel expense 596.01
Supplies
REPAIRS AND MAINTENANCE
REPAIRS AND MAINTENANCE
REPAIRS AND MAINTENANCE
Unexpended balance \$ 12,746.25 Appropriation 54,875.00 Disbursements \$ 30,239.06 Unexpended balance \$ 67,621.25 DETAIL OF DISBURSEMENTS Forestry \$ 10,550.63 Parks 10,762.86 Wardens 185.28 Fisheries 8,710.54
Wardens 185.28 Fisheries 8,710.54
Fisheries 8,710.54
Game Farm 29.75
\$ 30,239.06
DIGDLING DA DA DA DA G
DISBURSEMENTS BY PARKS
Peninsula State Park \$ 4,442.59 Devil's Lake State Park 2,395.61
Devil's Lake State Park 2,395.61 Interstate Park 1,088.77
Nelson Dewey Park 378.72
Pattison State Park 9.50
Northern Forest State Park 186.00
Belmont State Park 40.00
Tower Hill State Park 251.91
Terry Andrae State Park
Perrot State Park. 541.26 Cushing Memorial State Park. 3.25
\$ 10,762.86
DISBURSEMENTS BY HATCHERIES
Madison hatchery 1,049.21
Bayfield hatchery 1,268.61 Minocous batchery 240.64
Delafield hatchery 1,204.18 Wild Rose hatchery 916.94
Sturgeon Bay Hatchery 875.66
Shahauran hatahami
Sparta hatchery 302.58 Eagle River hatchery 54.16
Sparta hatchery 302.58 Sparta hatchery 54.16 Eagle River hatchery 301.08 Eau Claire hatchery 301.08
Tenney Park hatchery
St. Croix Falls hatchery 676.83
Westfield hatchery 308.72
Brule hatchery 127.79 Hebron hatchery 258.16
Hebron hatchery 258.16 Burlington hatchery 6.55
Osceola hatchery 775.32
Transportation 164.53 Collection of spawn 126.79
\$ 8,710.54
PROPERTY AND IMPROVEMENTS
Unexpended balance
Appropriation
Sale of Automobiles 660.00 Disbursements 91,943.86
Disbursements. \$ 91,943.86 Unexpended balance 37,200.84
\$ 129,144.70 \$ 129,144.70

1	DETAIL OF DISBURSEMEN			
		496.85 16,908.54		
Forestry Parks		17.345.59		
Wardens		8,524.27 40,886.99		
Fisheries		40,886.99 7,905.79		
Game Farm Education and Publications		380.88		
			_	
			\$	91,948.86
	DISBURSEMENTS BY PAR	z o		
Denis mula State Bank		6,459.36		
Devil's Lake State Park		2,875.35		
Interstate Park		854.50		
Northern Forest State Park.		471.81 32.95		
Tower Hill State Park		72.14		
Terry Andrae State Park		6.220.31		
Potowatomi State Park		153.24		
Perrot State Park	K	12.68 193.75		
Cusning Memorial State Pari	~			
			\$	17,345.59
	-			
	BURSEMENTS BY HATCH			
r isneries Administration Madison hatchery		3.251.33		
Bayfield hatchery		2,946.10 2,786.04		
Minocqua hatchery		2,786.04		
Delafield hatchery		70.00 2,187.87		
Sturgeon Bay hatchery		597.91		
Sparta hatchery		1,236.08		
Eagle River hatchery		596.82		
St Croix Falls hatchery		768.78 1,258.79		
Westfield hatchery		4,166.08		
Brule hatchery		315.50		
Burlington hatchery		9,956.12 249.95		
Osceola hatchery		7,210.78		
Birchwood hatchery		185.00		
Wisconsin Rapids hatchery		19.33 155.77		
Transportation		1,727.92		
Collection of spawn		285.97		
•	-		\$	40,886.99
	BOUNTIES		_	
Disbursements—General Fun	nd		\$	77,294.00
Disbursements—Conservation	n Fund			1,140.00
	-		\$	78,434.00
מ	REDATORY ANIMAL CONT	rrot.		
Disbursements		15,000.00	8	5,145.09
Unexpended balance			•	9,854.91
	-	15,000.00	\$	15,000.00
	•		_	
	EMERGENCY FIRE WARD	ENS		
Disbursements			\$	49,588.88
	•		\$	49,533.88
	-			
	PARK PURCHASE FUNI)		
Unexpended balance		10,716.55		
Receipts		6,072.89	_	10 500 0:
Unexpended balance			<u>*</u>	16,788.94
	3	16,788.94	\$	16,788.94

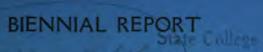
142 WISCONSIN CONSERVATION COMMISSION

LAND AND IMPROVEMENTS—WEST	FIEL	натсні	ERY	
Unexpended balance	. _\$	700.00	\$	700.00
	\$	700.00	\$	700.00
STATE PARK RECREAT	\$	195.50		
Receipts Disbursements Unexpended balance		6,585.00	\$	4,027.56 2,702.94
	<u>;</u>	6,780.50	<u>\$</u>	6,730.50
COPPER FALLS STATE I	-\$	17,000.00	\$	15,008.8 8 1,991.17
Unexpended balance		17,000.00	<u>-</u>	17,000.00
	<u> </u>		Ť	
CLARK-McNARY FUN Unexpended balance Receipts Disbursements Unexpended balance	-\$ -	18,416.81 40,185.04	\$ `	46,304.28 7,247.07
	\$	53,551.85	\$	58,551.35
BOAT FUND Unexpended balance	<u>.</u>	3,289.91 1,640.65	•	856.64 4,078.92
•	\$	4,930.56	\$	4,980.56
HATCHERY IN RACINE, WALWORTH OR Unexpended balance	-\$	NOSHA CO 9,282.76 10,000.00	UNT	Y
Disbursements			\$	19,232.76
	<u></u>	19,232.76	<u>*</u>	19,282.76
ROUGH FISH—NORTHERN V	.\$	RS 19,787.88 15,000.00		
Appropriation Disbursements Unexpended balance	-	15,000.00	\$	7,880.85 27,857.48
	\$	34,737.83	\$	84,737.83
FOREST NURSERY				
Unexpended balance Appropriation Disbursements Unexpended balance	-	1,923.20 27,500.00	\$	14,631.32 14,791.88
	\$	29,428.20	\$	29,423.20
ROUGH FISH—WINNEBAGO	WAT	ERS		
Unexpended balance Appropriation Receipts	•	20,881.68 20,000.00 3,389.82	•	g q49 n7
Disbursements Unexpended balance	·		•	8,942.07 34,729.43
	\$	48,671.50	<u></u>	43,671.50

HORICON RIVER DAM				
Unexpended balance Disbursements Unexpended balance	.\$	10,000.00	\$	1,889.95 8,660.05
	\$	10,000.00	\$	10,000.00
HORICON MARSH REFU	GF.		_	
Unexpended balance	.\$	50,000.00 25,000.00	•	75,000.00
Onexpended balance	•	75,000.00	-	75,000.00
PARK ROADS	<u> </u>		÷	
Unexpended balance	•	32,882.40 50,000.00	\$	65,202.59 17,679.81
Unexpended balance	<u> </u>	82,882.40	\$	82,882.40
FIRE LOSS	<u> </u>		÷	
Insurance		25.48	\$	25.48
	\$	25.43	\$	25.43
RECEIPTS				
Non-resident fishing ligeness			-\$	215,756.38 7,941.45
Fish shipping coupons. Non-resident hunting licenses. Resident hunting licenses.			-	7,941.45 5,725.00 148,250.80
Settlers' hunting licenses. Duplicate licenses. Deer tags. Trapping licenses.				149.00 841.00
Trapping licenses			-	387.85 25,128.45 26,329.06
Confiscations			_	17.609.84
Warden fees. Clamming licenses Set line licenses.			-	4,204.33 1,655.00 2,299.50
Guida licenses				565.00
Fish dealer licenses. Great Lakes fishing licenses. Mississippi river fishing licenses. Rough fish			-	1,425.00 9,390.58
Mississippi river fishing licenses			-	2,894.50 81,866.91
Decoy Danus				1.639.54
Nursery Fur farm licenses				3,822.45 12,666.13
Deer farm licenses			-	126.00 191.75
Park leases and rentals				6.072.39
Fire control (Clark McNary fund)			-	6,535.00 40,135.04
Park recreation Fire control (Clark McNary fund) Boat Fund receipts Removal of rough fish—Winnebago				1,640.65 3,339.82
Interest		. 		7,153.96
Refunds Insurance receipt				553.54 25.48
Insurance receipt Miscellaneous Forestry mill tax				17,799.06 298,797.62
Foresty min was			_	
CONSERVATION FUN	D		\$	901,368.03
Unexpended belance	•	296,331.02		
Receipts Forestry Mill Tax Interest on fund	· -	594,837.48 298,797.62 7,153.96		
Interest on fund Refunds on disbursements	-	7,153.96 553.54		
Insurance receipts		25.43		
Disbursements Bounties			\$	868,298.57 1,140.00
Refunds of receipts.				7,844.30
Unexpended balance	_		-	320,416.18
	\$:	1,197,699.05	\$	1,197,699.05

TABLE OF CONTENTS

	Pag
Personnel Page	- :
Letter of Transmittal	. ;
In Memoriam	. 4
Organization Chart	. (
Foreword	. 1
Recommendations	19
Conservation Dates	25
Forestry	26
Forest Protection 1929	36
Forest Protection 1930	42
State Parks	48
Fisheries	56
Game	83
Law Enforcement	97
Education and Publications	115
Research Bureau	128
Financial Statement 1928-1929	130
Financial Statement 1929-1930	187



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STATE CONSERVATION COMMISSION

OF

WISCONSIN

FOR THE

Fiscal Years Ending June 30, 1931 and June 30, 1932



MADISON, WISCONSIN 1932

BIENNIAL REPORT

OF THE

STATE CONSERVATION COMMISSION

OF

WISCONSIN

FOR THE

Fiscal Years Ending June 30, 1931 and June 30, 1932



MADISON, WISCONSIN 1932

STATE CONSERVATION COMMISSION

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E. M. DAHLBERG, Secretary, Ladysmith

L. M. Hobbins, Madison

R. B. GOODMAN, Marinette

RALPH M. IMMELL, Madison JAMES CORCORAN, Webster

STATE CONSERVATION DEPARTMENT

PAUL D. KELLETER Conservation Director

> MATT PATTERSON Deputy Director

DIVISION HEADS

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B. O. WEBSTER, Supt. of Fisheries F. G. WILSON, Supt. Co-op. Forestry

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TABLE OF CONTENTS

Administration	age
Policies	5
Activities	44
Statistics	
Forestry—Forest Protection	
Policies	9
Activities	
Statistics	
Unemployment Relief	
Policies	15
Activities	
Statistics	
Forestry—State Forests and Reforestation	110
Policies	17
Activities	
Statistics	120
Co-operative Forestry—Forest Crop Law	
Policies	
Activities	
Statistics	134
Co-operative Forestry—County Forests	
Policies	24
Activities	67
State Parks	
Policies	27
Activities	69
Statistics	135
Fisheries	
Policies	30
Activities	
Statistics	
Game	
Policies	84
Activities	
Statistics	
Law Enforcement	101
	88
Activities	
Statistics	108
Public Relations	
Policies	
Activities	. 98

LETTER OF TRANSMITTAL

HONORABLE A. G. SCHMEDEMAN,

Governor of Wisconsin

Sir: We herewith submit the biennial report of the State Conservation Commission of Wisconsin. This report is divided into three parts.

Part I sets forth the responsibilities imposed upon the conservation commission by the legislature, the conditions and emergencies arising in the discharge of these responsibilities, and the policies adopted to promote the objectives of the conservation laws.

Part II presents the organization, administration, and field activities of the conservation department.

Part III presents statistical data, maps, and a detailed statement of receipts and disbursements.

Respectfully submitted,

STATE CONSERVATION COMMISSION,

HASKELL NOYES, Chairman, E. M. DAHLBERG, Secretary, R. B. GOODMAN, L. M. HOBBINS, R. M. IMMELL, JAMES CORCORAN.

Part I—Section 1

ADMINISTRATION

Conservation means the permanent use by man of all natural resources.

The conservation commission is charged with the administration of Wisconsin's conservation laws, which include the utilization, protection, and development of all wild life—fish, game, and forest—and specifically the management of state forest lands and parks.

This report of the policies of the conservation commission and the activities of the conservation department for the biennium presents the wide diversity of these functions and their social and economic values.

Brief history of conservation administration

The first official interest in the conservation program in Wisconsin is reflected by the creation of a committee to investigate forestry conditions under Chapter 36, Laws of 1867, passed on March 23, and in the report of that committee published later the same year. Among other things, this committee was appointed to investigate the results of denudation of forest areas and of consequent influence on climate, rainfall, erosion, etc. It is interesting reading to see the arguments used today expressed in the report published in 1867.

This first committee probably reflects the influence of Carl Schurz, then a resident of Wisconsin and an intensely interested conservationist. The chairman of the committee was Increase A. Lapham of Waukesha, also an ardent lover of the out-of-doors. The report itself was a masterly and studious treatise on the benefits of forests and trees. It also gave extensive botanical information about trees, their care, and methods of planting.

Little was accomplished by this first committee, and no lasting program was begun. There were state timber agents appointed in 1869, but their interest was primarily to prevent the theft of timber from state lands. There was no evidence of interest in real protection or management. This state of mind, however, was not peculiar to Wisconsin, but merely indicative of the public approach to and regard for all timber resources in the several states.

The next official interest in the forestry program came in 1878, when by legislative action, a tract of 50,000 acres in what was then Lincoln county in northern Wisconsin, was set aside as a timber reserve and called "The State Park." This existed until 1897, when again by legislative act, these lands were sold to lumber companies and the state park project abandoned. Parenthetically, it may be

remarked that many of the lands once contained within this state park subsequently were repurchased after the timber was cut, and are now contained within Northern State Forest in Vilas county.

Six years after this backward step was taken, there was created in 1903, a State Department of Forestry, and legal provision was made for the purchase of lands for forest purposes. In 1905, a state forester was employed. Subsequent efforts showed, unfortunately, that such action was too much in advance of public sentiment. Consequently, the essential support was lacking when the forester began to function, and although a program was developed and maintained for several years, the adverse forestry decision of the Supreme Court in 1915, sounded the death knell for steps taken up to that time.

Beginnings were made in other conservation activities and programs progressed concurrently with the forestry program. The first date in a fisheries program really antedates the beginning of the forestry program by one year when a fish inspector was appointed by legislative act in 1866. Twelve years later there was appointed a "Commissioner to Receive Spawn," and in the following year the first state fish hatchery was established at Madison. Fish wardens began to function in 1887, and a State Fish and Game Warden was appointed in 1891. In 1895, there was appointed a fisheries commission of seven members. This commission existed until 1915, and in 1907 the commission appointed for its administrative officer a superintendent of fisheries.

Although the state made an early beginning in fish propagation, there was no early state program in the propagation and stocking of game.

The first game wardens were appointed the same year the first fish wardens were, in 1887. Four years later the two sets of officers were combined into one department under a State Fish and Game Warden. This form of fish and game law enforcement also existed until 1915.

The beginning of the present state park system may be dated from 1899, with the establishment of the Interstate Park Commission, created to purchase and develop lands along the St. Croix river in Polk county, in co-operation with a similar commission appointed by the State of Minnesota to do the similar work on the Minnesota side of the river. This commission was renewed in 1901, by which time some land had been acquired.

In 1906, by gift from the Nebagamon Lumber Company, the state acquired the 640 acres which made up the Brule State Park which has since become the nucleus of the Brule River State Forest. In 1910, purchase was begun in Door county in the area since named Peninsula State Park. Devil's Lake State Park in Sauk county, was acquired by purchase in 1911, and in 1915 Cushing Memorial State Park in Waukesha county was presented to the state.

In 1915, conservation activities of the various boards and commissions were combined into a conservation commission. This organization combined and correlated the activities of the then existing State

Board of Forestry, State Park Board, State Fisheries Commission, and State Fish and Game Warden Department. Since 1915, there have been changes in organization, but the scope of its activities has never lessened. Administration of forestry, fish, game, and law enforcement still remain the primary responsibilities of the conservation commission, and there have been added to its duties many other functions.

The first commission was composed of three commissioners and a secretary. It existed until 1923, at which time the legislature abolished it and created a single commissioner form of administration. Under the commissioner several division superintendents carried on administrative work in the several divisions. This form of administration continued until 1927.

With the beginning of the public understanding of the necessity for a conservation program, the scope of the work of the Wisconsin commission broadened greatly. With the broader scope, it was thought that a wider viewpoint and wiser judgment could be secured for establishing conservation policies. Consequently, the legislature of 1927 created the present State Conservation Commission. It is composed of six commissioners who serve without remuneration. The commissioners, three of whom must reside in the southern and three in the northern half of the state, are appointed by the governor with the advice and consent of the senate, to serve for six years. Two are appointed every odd year. It is this commission which today directs the policies of the conservation movement in Wisconsin.

The conservation program resulting from the policies established by the commission, is administered by a conservation director appointed by the commission. It is the responsibility of the conservation director to execute the policies of the commission and to direct and correlate the activities of the various divisions of the conservation department, each of which is headed by a superintendent responsible to the director.

General administrative policies

At the present time, grouped under the general heading of State Conservation Department, there are eight divisions—administration, forests and parks, forest protection, co-operative forestry, fisheries, game, law enforcement, and public relations. In addition to the activities directly indicated by the names of various divisions, there are others which have been administered jointly by one or more of the various divisions.

The conservation director is the logical connecting link between the various protecting, producing, and educational divisions of the department and the commission, the legislature, and other agencies both public and private within and without Wisconsin which concern themselves with conservation.

The finance and accounting of the entire department is done by the division of administration. During the past year under a new policy, a decided improvement has been made in the accounting system of

forestry activities. This system will be extended to all activities at the beginning of the next fiscal year beginning July 1, 1933.

Under a policy tending toward further co-ordination, most records and statistics for all divisions are compiled and kept by the division of administration, as is the complete inventory of equipment of all divisions.

Part I—Section 2

FORESTRY—FOREST PROTECTION

Introductory

A conservation program in Wisconsin, to be successful, must have as its basis a sound forestry program. Wisconsin's natural resources—game, fish, beauty—are principally biological resources. They all depend directly or indirectly upon some type of forest cover for food, cover, or protection. Basic in importance in forestry is an effective program of forest protection.

Successful forest protection depends upon a favorable public sentiment, adequately trained personnel, ample equipment, and a flexible administrative agency. Forest protection may be divided into three activities—fire prevention, fire detection, and fire suppression. Unfortunately, the history of forest protection, both in Wisconsin and elsewhere, reveals a general unwillingness to appreciate the importance of fire prevention in a forest protection program. Everywhere, until recent years, there has been exhibited an unwillingness on the part of legislative bodies to appropriate sufficient money for fire prevention activities. All systems were so organized that fire detection and suppression were stressed rather than fire prevention. In the past few years, however, this attitude has changed and fire prevention is at last coming to be recognized as extremely important.

During the five years immediately preceding the biennium the area under forest protection in Wisconsin was increased from 7,200,000 to 13,600,000 acres. Increasing an area under forest protection always brings an apparent increase in the total number of fires, which frequently reflects unfavorably upon the forest protection organization. The apparent increase in the number of fires is due to the fact that all fires in the enlarged area are reported when the area is included in a forest protection district, whereas reporting in the new area was casual and haphazard prior to the enlargement.

The apparent increase in the number of fires, coupled with the real increase in number and severity caused by the abnormal drouth which began in May, 1929, did more to awaken public interest in forest protection in a few short months than has been done in many years preceding. Public attention was called to the inadequacies of personnel, equipment, transportation, and communication systems.

Acting under authority of the constitutional amendment of 1925, the 1931 legislature granted to the conservation commission a direct appropriation of \$600,000, most of which was allotted by the commission for forest protection work. Late in the second quarter of 1931, Commissioner Ralph M, Immell was placed in charge of the

reorganization of the forest protection activities of the department, and Commissioner Robert B. Goodman was appointed as advisor. The development of the forest protection program was accomplished through the instrumentality of the conservation director with the advice and approval of the commission.

The first step in the reorganization was a combination of forest protection districts into forest protection areas. There are 11 forest protection districts in the state, each comprising from 800,000 to 1,500,000 acres. They aggregate 13,600,000 acres. In the organization of these districts into areas, the former district rangers were left in charge of the district, and made responsible to the new officer, an area warden.

An important program of co-operation was developed. The American Legion posts in the state were appealed to to co-operate in preventing and suppressing forest fires. Sixty-six posts promised co-



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operation and organized fire fighting groups in accordance with suggestions from the commissioner in charge.

The psychological effect of having available for call, groups of men above the suspicion of incendiarism tends to reduce the number of incendiary fires in any locality because potential incendiarists are restrained by the knowledge that they would not profit.

The administrative program consists of fire prevention, fire detection, and fire suppression.

Fire prevention

Fire prevention requires the consciousness of all the people who live in or visit a forest area that forest protection is a state asset. Such a public consciousness can be attained only through education. The conservation commission has an educational policy which is intensified in forest protection districts. This is furthered by contact with all types of organized groups including schools, city clubs, women's clubs, Boy and Girl Scout groups, Junior Forest Rangers, farmers' institutes, etc.

It has been noted by many years' experience that as forest protection activities become a standard practice within a district, the people become more co-operative. This is evidenced by the fewer fires in older protection districts as compared with newer protection districts.

There also must be restrictive laws and efficient enforcement to regulate burning within protection districts at times when a fire hazard exists. Wisconsin statutes provide for burning permits which may be issued by forest officers to residents within protection districts. Such permits must be obtained before any fire may be set that is not intended either for cooking food or warming the person from the time snow melts in the spring until the ground is snow-covered in the fall. The granting of such permits in the past has been left to the personal judgment of the forest officer in the district. In the reorganization of forest protection activities, a more rigid policy of enforcement was put into effect and at times all burning permits were cancelled and no more issued until the fire hazard lessened.

Fire prevention also requires the patrol of roads, railroads, and boundaries of forest lands, and the regular inspection of railroad locomotives.

Fire detection

The keystone of the whole fire detection system is the lookout tower. Adequate fire detection depends upon the establishment and maintenance of an adequate lookout tower system. The policy of the commission is to establish towers in all areas not adequately covered contained within forest protection districts, to make existing towers and new towers safe and comfortable for the observers, and to equip all towers with accurate fire detection devices and communication systems.





Early windmill type tower. New standard ladder tower.

Old Rest lake tower.
New Rest lake stairway tower.

When the forest protection program was intensified, an engineer was detailed to make a survey of existing towers and to design a new standard tower combining the best features of old state and federal towers with several new advantages. Rapid and intensive work on the part of a special crew resulted in the adoption of a new type tower.

Communication is vitally important in a fire detection program. The policy of the commission immediately following the reorganization of forest protection work, was to perfect a communication net which connected all towers with forest protection district headquarters, and made it possible for district rangers to communicate with area fire warden headquarters at all times and with their own subordinate rangers and emergency fire wardens.

The telephone is the most reliable and convenient means of communication as far as detection work is concerned. Under the new program, in its effort to find the best, an experiment was conducted with the use of short wave radio telegraphy, but it failed to prove the radio more efficient than the telephone. Further experiments will be made with radio telephony.

Another experiment in detection and suppression work involved the use of airplanes. For a month during the fall of 1932, the department engaged the services of an experienced aviator and a six-place cabin type monoplane equipped to land and take off on water. The experiment tended to try the theory of the use of planes in fire detection, and the transportation of crews from headquarters to fires. During the period of the experiment the new method failed to prove its superiority in any instance.

It is imperative in detection and suppression work that crews be equipped to reach a fire as soon as possible after it is reported. Accurate maps are necessary if detection is to be most efficient. A complete revision and standardization of sectional maps in co-operation with the State Highway Commission and the Wisconsin Geological Natural History Survey is now well advanced. In addition, under the new policy, new accurate tower maps were prepared for the 108 lookout towers, and new maps are being prepared for the 11 districts.

A valuable field of co-operation was opened by contact with county highway organizations of all counties in forest protection districts. In several counties all road patrolmen were furnished with fire fighting tools, with instructions to immediately suppress all small fires and to report any fire which they could not control themselves. This policy of co-operation greatly expanded the field force at the disposal of the forest protection organization. In certain instances this field of co-operation was extended to include the use of county highway equipment for fighting fires.

Fire suppression

The objective of the forest protection organization in fire suppression is to confine every fire to the smallest possible area. This is

accomplished by reducing the elapsed time between the time the fire is reported and the time the crew reaches it, and by having the crew stay on the fire until it is absolutely out.

Adequate fire suppression requires the use of all roads, public and private, for the purpose of transportation to all places in forest protection districts where fires are likely to occur. Men drafted to fight fires must be above the suspicion of incendiarism and care and selection of crews is a vital factor in effective fire suppression.

Experience of the past three years has shown the inadequacy of an organization designed to cope with ordinary fire conditions when it is suddenly confronted with extraordinary ones. The policy of the commission is to furnish the fire fighting organization with ample equipment to cope with any fire situation which might arise. When the organization is so equipped to cope with the most serious fire conditions, it can all the more readily handle ordinary fire conditions.

Part I—Section 3

UNEMPLOYMENT RELIEF

Introductory

The general reluctance of legislative bodies in the past, both in Wisconsin and elsewhere, to appropriate moneys for pre-suppression activities has handicapped the work of forest protection organizations and has contributed largely to the severity of fires. In Wisconsin the need for pre-suppression work was illustrated graphically and disastrously by a bad fire in September, 1930, in central Wisconsin, which burned over 120,000 acres in 10 days. This is the largest fire from the standpoint of area covered which has ever burned in Wisconsin. This fire at its greatest extremity, measured 97 miles in circumference.

The principal reason the fire attained such a great size was that there were no through roads in the district. This made it impossible for fire fighting crews to reach the heart of the fire. At times during the fire, when the wind would change even slightly, it was frequently necessary for crews to travel as far as 30 miles to reach the new front. Had there been fire roads upon which suppression equipment could travel, and fire lanes from which backfiring could be done, this fire would not have attained the proportions of a conflagration.

Throughout Wisconsin's forest protection districts similar situations might occur. The scarcity of roads in areas of intense fire hazard intensifies the danger and increases the likelihood of big fires. Any money spent for road building and fire lane building prior to the time of the fire is more than saved by the smaller damage and lower suppression costs of small fires as against big fires.

In special session, the 1931 legislature as part of its general unemployment relief program, assigned a specific task and specific fund to the conservation commission for this purpose. Chapter 29, Section 2, Laws of the Special Session of the 1929 Legislature, reads: "Five hundred thousand dollars is allotted to the conservation commission, for the building of fire lanes and roads and other necessary fire protection work, and this appropriation shall remain available for the purposes for which it is made until used. The projects to be undertaken under authority of this section shall be determined by the conservation commission after consultation with the interim committee on the cut-over land and tax problems of northern Wisconsin created by Joint Resolution No. 28, S., of the regular session of 1931. As far as consistent with efficient and economical administration, all work hereunder shall be so conducted as to afford employment to the

maximum number of unemployed or partially employed citizens of the state."

Policy and program

As expressed in the statute, the purpose of the unemployment relief appropriation was to relieve the distress of the unemployed and to augment the facilities for forest protection. Commissioner Immell in charge of forest protection and the director, on the order of the commission, undertook the administration of this project. Reconnaissances made by the conservation department throughout the forest areas of the state prior to the appropriation, provided information showing the need for and the possibility of the construction of fire lanes, fire roads, and the removal of serious fire hazard. Conferences were held with the special legislative interim committee and with local town and county officials throughout the forest protection districts, to make sure that projects would be effective and would answer both the purposes of the appropriation. It was planned from the beginning to carry on a large number of projects simultaneously throughout the forest protection districts to make the relief feature as widely effective as possible.

The policy the commission laid down in administering the unemployment relief program was to provide employment for as many people as possible. In carrying out projects, crews were rotated every 10 or 12 days, thus spreading employment even further. The rate of pay was arrived at in co-operation with the State Industrial Commission. In choosing projects, every consideration was given to the type of work which would provide the maximum amount of labor so that a minimum amount of money should be spent for tools and the most for wages.

Responsibility

The development of such a system of fire lanes and roads, as made possible by this unemployment relief program, carries with it a serious responsibility. Fire roads and lanes developed under this appropriation must be considered single purpose improvements. They should never be considered parts of any highway system, and should be subject to closing in times of fire hazard. The tremendous increase of usable roads in forest areas increases the opportunities for game law violations which also adds an element of repsonsibility to the program. Also, if the improvements are to be of lasting benefit and not to become menaces in the future, there is an important item of upkeep to be considered.

Part I—Section 4

FORESTRY—STATE FORESTS AND REFORESTATION

State Forests

Introductory

The underlying policy governing the acquisition, development, and management of state forests in Wisconsin was suggested in the introduction of the report of the Interim Committee on Forestry and Public Lands published in Madison in March 1929. "We are convinced that the state may well engage, on a reasonable scale, in developing state owned forests, but we are likewise convinced that the best results can be obtained through private ownership, with state aid and encouragement."

All policies regarding state forest acquisition and management must be considered with regard to their effect on private enterprise. State forests should be proving grounds where the possibilities of proper forest management can be demonstrated to encourage landowners to engage in private forestry to their own advantage and in the best interests of the state.

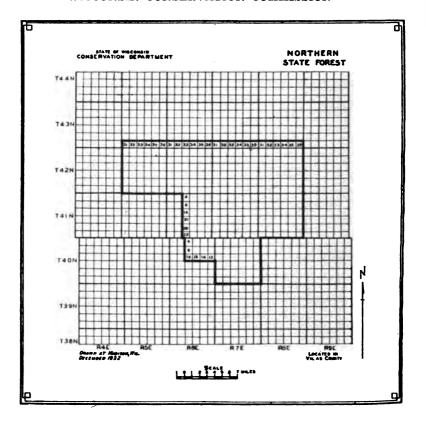
State owned lands in Wisconsin come under two classifications. First, those under the administration of the commissioners of public lands; and second, those that come under the jurisdiction of the conservation commission. The commissioners of public lands are a constitutional body created to act as trustee for trust fund lands, proceeds from the sale or management of which accrue to various school funds. The conservation commission has under its jurisdiction lands expressly dedicated to park or forest purposes. At the present time the state owns approximately 350,000 acres of land, of which about half is under the jurisdiction of the commissioners of public lands and the remainder under the jurisdiction of the conservation commission.

Just preceding the beginning of the biennium under consideration, the commission directed that a survey be made of the possibilities for the establishment of definite state forests. This survey was to consider particularly the location, suitability, and compactness of the various areas of state owned lands, and of the relationship of possible state forests to the areas which had either been established or had been contemplated for similar purposes by the federal government.

First state forests

A report on this investigation was made in the early part of the present biennium and resulted in the definite establishment by commission action of the first permanent state forests. This first action established four such areas: Northern State Forest in Vilas county,

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Brule River State Forest in Douglas county, American Legion State Forest in Oneida county, and Flambeau River State Forest in Sawyer county.

The primary consideration in the establishment of the first state forests was to designate an area about a nucleus of state owned lands. This policy determined the location of the first four areas.

The policy for the establishment of future state forests pays particular attention to their location with regard to principal Wisconsin wood-using industries, particularly the paper and woodpulp industries. A subcommittee of the Governor's Committee on Land Use and Forestry made a thorough investigation of the present and contemplated state forestry activities with reference to the two industries mentioned above. It was the opinion of this committee report that the location of future state forests should be governed by their proximity to and transportation facilities with these primary industrial districts. This view fitted in well with the state forest policy.

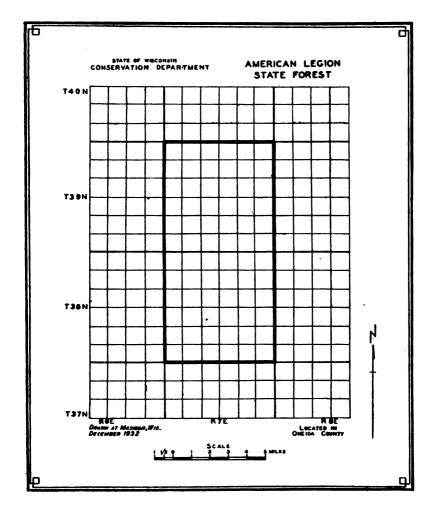
Present plans call for the ultimate state ownership of approximately one million acres in four established and three proposed units.

It is the policy of the conservation commission to develop these state

forest areas by blocking up holdings contiguous to present state owned lands wherever possible. Most of the lands contained within these areas will need planting and intensive forest protection. Only on the Flambeau River State Forest is there any appreciable amount of virgin timber. Contained within several of these areas are state owned lands coming under the jurisdiction of the commissioners of public lands. These lands should be forest managed with the lands under the jurisdiction of the conservation commission.

Co-operation with State Board of Control

During the biennium an important policy of co-operation was put into effect between the conservation commission and the State Board



of Control for the use of prison labor on state forest areas. Most forestry work cannot be done by mass production machine methods. It requires much hand labor. Because of this and a deficiency in appropriations in previous years, many worth while forestry projects have had to be postponed. Under this co-operative arrangement much work can be done at an earlier date than would otherwise be possible. In addition to the benefits to the State of Wisconsin, an opportunity is afforded to provide inmates with outdoor work of a healthful and character-building nature.

In this connection arises the necessity for a division of responsibility. The board of control has complete disciplinary control over all prisoners and the responsibility of guarding them in camps and at work. The conservation department selected the areas in which work was needed most urgently, laid out projects, furnished tools and equipment, and provided foresters to direct the undertaking. This co-operative agreement extends only to the use of convict labor on state forest lands.

Reforestation

Striking progress has been made during the biennium in the enlarged program of reforestation developed under a new policy. More trees were planted on more acres of land in state forests in the year 1932 than there had been during the preceding 20 years of state reforestation activities.

The new reforestation policy of the conservation commission resulted from the report of a subcommittee of the Governor's Committee on Land Use and Forestry. The preface and introduction of the report, issued early in 1932, indicated the nature of the research and the scope of the policy adopted. The preface stated:

- "1. That its report is to be made, keeping in mind the possibilities of wood production for Wisconsin paper and woodpulp industries, and the relation that planting activities carried on directly by the state may have by way of assistance and encouragement to similar activities carried on directly by the pulpwood companies on their own land.
- "2. That the activity of the state in this respect will have as its objective the planting of 10,000 acres in 1932, and annually thereafter for a five year period on state owned lands.
- "3. That such work will be done in a manner as to location, species, methods, costs, etc. that will contribute most to the future requirements of the pulp and paper industry and secure to the state a desirable market for the forest crop produced on its own land."

Extracts from the introduction follow:

"The paper and woodpulp industries are located in three rather distinct areas in Wisconsin, as follows.

- "1. Menomonie-Peshtigo-Fox river district, hereafter called the Northeastern district.
- "2. The Wisconsin river valley district of central and north central Wisconsin, hereafter called the Central district.
- "3. The Flambeau-Chippewa river district of northwestern Wisconsin, hereafter called the Northwestern district.

"Tributary to these districts are large areas of potential forest land, suitable for producing a variety of tree species well suited for pulping. The lighter soils are best suited for pine trees. The heavier soils, generally stony, are best suited for spruce and The attached sketch shows the chief areas of potential forest land in the state. . . . It should be borne in mind that there are many well developed farming communities within the principal potential forest region. There are likewise large areas of fertile lands, as well as lean or stony soils, and these fertile lands have potential farming as well as forestry possibilities, depending on economic conditions. boundary of these potential forest regions there are large areas in the aggregate of woodland, not only as a part of the going farms of the region, but areas of woodland that are essentially best suited for the growing of trees, and some of these areas, even though they may not be as extensive, are even more available to certain specific woodpulping mills than lands located within the defined primary potential forest regions of the state. These forest areas outside of the defined primary regions are generally immediately surrounded by operating farms and offer ideal possibilities between farmer forestry and industrial forestry in the growing of pulpwood timber.

"In the development of the primary potential forest regions, the less fertile soils will play a very important part in producing the wood requirements of the paper and woodpulping industries in this state in the future. The more fertile lands will also play their part in producing certain tree species that will be constantly needed in the paper and pulp mills, which the lighter soils cannot produce. These areas of good, heavy land offer attractions to these industries at the present time because they can be acquired at comparatively low prices and will be sub-marginal for agricultural purposes for many years to come . . .

"Assuming a general growth figure of three-fourths of a cord per acre per year, it would require a net productive area of approximately 1,580,000 acres in continuous wood production and under intensive forest management to supply the needs of the mills above listed. This net productive area would involve at least a gross area of again as much land if open swamp and other unproductive land is considered. While a large portion of the present pulpwood comes from outside the limits of the state, the development of the forestry program will provide constantly increasing supplies of home grown pulpwood, and the future should witness

a constantly increasing expansion of the woodpulping industry in Wiscensin."

In view of the policy suggested by the above quotation, the special committee considered all the factors necessary to translate the policy into an immediate and successful program. Among these factors were: (1) the locations available for planting; (2) the proper species to plant; (3) the available sources of seedling stock; (4) present and future nursery requirements; (5) spacing; (6) method of planting; (7) equipment; and (8) costs for field planting.

Co-operative reforestation enterprises

Planting on state forests is the principal factor in the state's reforestation program. However, to encourage extensive reforestation, the commission follows a policy under which planting stock is furnished at reasonable cost to landowners in Wisconsin for reforestation work in this state. Landowners who secure stock in this way must sign a statement agreeing that the trees will be planted for the establishment of a forest or the improvement of an existing forest, but not for ornamental or landscape purposes. Farm woodlots and farm windbreaks are considered forest planting in this connection.

Recipients of trees also furnish information as to where the trees are to be planted, and they agree not to dig, cut off, or move the trees until they are large enough to be sold for merchantable timber. They further agree to furnish reports as to the progress of the planting, to the conservation department whenever requested, and to protect the area planted from fire, trespass, and grazing.

Another co-operative phase in the reforestation program includes the furnishing of planting stock for planting on county forests. A considerably increasing number of demonstration forests, school forests, and memorial forests has meant an increasing use of state nursery stock. Trees for such purposes have been furnished without cost to educational groups for demonstration planting under the direction of foresters representing the conservation department.

Part I—Section 5

CO-OPERATIVE FORESTRY

Forest Crop Law

Introductory

Until the forest crop law was enacted, all forest property was taxed on its "wrecking value." It was assessed, not on its productive capacity, but on the value which could be secured by wrecking the forest and selling the products thus secured. As a result the forests of Wisconsin were destroyed. This was not so serious where the land was taken up for farms. But for the most part the plow has failed to follow the axe and now Wisconsin has 10 million acres of cut-over land.

Since this land is yielding no return to the owners, it is dropped through non-payment of taxes. As a result many counties are suffering from a shrinking assessment base and reduced income. Meanwhile, many wood using industries have completed their cut and discontinued milling operations for lack of raw material. It is now clear that taxing forests on their "wrecking value" results not only in the destruction of the forests, but also of the industries and communities dependent on them for raw material.

The forest crop law aims to encourage the growing of timber on Wisconsin's vast area of cut-over land, with the hope that tax delinquency would decrease and raw material for Wisconsin wood using industries would be assured. It is clearly unprofitable to raise timber when the accumulated growth of previous years is taxed year after year. Taxing a stand of timber, which constitutes the accumulated crops of many years, is equivalent to taxing a farm plus all the crops which had been grown for half a century. The forest crop law distinguishes between the land which is capital and the timber which is the crop or income, taxing the land annually and the timber only when it is cut and the income is realized. It is clear that the forest crop law is a tax reform rather than a tax relief measure. It provides no exemptions.

Because the annual land tax is fixed for a fifty year period, it provides an element of certainty in a long time investment. Properly applied over a period of years, this law is of advantage to both the owner and the community. It will stabilize and maintain town income in the forest regions.

The conservation commission is charged with administration of the forest crop law with the co-operation of the State Treasurer and the tax commission. On lands entered under the law the State Treasurer

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annually pays to the towns in which the lands lie, the state's share of 10 cents per acre on certification of the town treasurer.

The tax commission determines the sums to be paid to the state when forest crop lands are withdrawn or cancelled. The tax commission also levies and collects all severance taxes on timber raised on forest crop lands.

The conservation department receives applications for the entry of forest crop lands, conducts hearings, recommends to the commission the entry of lands meeting the requirements of the law, examines all lands at least once in five years, and issues all orders of withdrawal. The conservation commission also determines and publishes the stumpage values to apply to forest products cut from forest crop lands.

Because this law departs so widely from former tax procedure, there was no experience to guide the several agencies, but experience has provided an understanding, both of the provisions of the law and procedure for its administration. Needed revisions of the law are indicated later in the report.

Entry of lands

The lands to be entered must be primarily more valuable for forestry than for other purposes, the owner must pledge the practice of forestry and either the existing forest growth or a reforestation plan must give reasonable assurance that a crop of merchantable timber will be produced.

Policy

It is the policy of the conservation commission to enter only such lands on which the soil, topography and forest cover, together with the owner's pledge of practicing forestry, indicate that there will be a return to the state and the owner sufficient to justify such entry.

County Forests

Introductory

A wave of tax delinquency is submerging the northern portions of the Lake States. Railroad logging developed in this region and large scale clear cutting operations left tremendous areas of cut-over and idle land.

When land is held for sale but brings no income with which to meet carrying charges, the owner's investment increases beyond any reasonable sale value and he finally stops paying taxes and drops the land. As tax delinquency grows, it forces further dropping of land both by concentrating the tax burden on fewer owners and by lowering the value of similar land in the vicinity, so that the incentive for carrying lands disappears.

It is now generally acknowledged that this cut-over land will not be taken up for farming. Most of it is unsuited to agriculture. In fact, farming has been tried on much of this cut-over land and has

resulted in failures. Further, much of the land lies within defunct drainage districts. The value on this land is represented by the price for which it can be purchased. One paper company recently bought 15,000 acres within trucking distance of its mills, for 25 cents an acre; and the United States Forest Service buys potential forest land in these cut-over districts at a lower price than it secures land in any other state in the Union. However, the area is so vast that purchase for state forests, federal forests, or private forest enterprises is not solving the problem. Consequently tax certificates are accumulating.

General considerations

Wisconsin is the first of the states where tax delinquent lands revert to the county, which has suffered from heavy tax delinquency involving a large acreage of cut-over land. Consequently there was no experience in other states which would serve as a guide, and Wisconsin has worked out its own solution of the problem. Three legislative sessions have provided the counties with the following powers needed to meet their new responsibilities:

- 1. "Excess delinquency" as an obstacle to the taking of tax deeds was disposed of by postponing payment to the towns until income was derived from the sale of the land or timber from the land and the county's liability was limited to such income.
- 2. Counties were authorized to create county forests and enter them under the forest crop law to secure to the town the "state's share," the state to take a 10 per cent severance tax as with all lands entered under the law.
- 3. During the 1931 session this was amended to provide for payment by the state to the county of an additional 10 cents per acre annually to be expended for the development of county forests, the state to approve the cutting of the timber and to receive 75 per cent as a severance tax.
- 4. The county zoning law was amended to authorize zoning for agriculture, forestry, and recreation. Zoning of county owned lands does not require approval of the towns in which the lands are situated.
- 5. Counties were authorized to exchange lands either to block county forests or to expedite zoning.

County boards in the north are now well informed on the need for taking deed promptly. Sound principles underlie the procedure now followed by most of these counties in selling, exchanging and blocking land holdings. Care is exercised in selling land to protect the towns from scattered settlement with resultant excessive costs for roads and schools. Lands not suited for agriculture are not sold to settlers. Timbered lands are not sold without assurance that they will not be stripped of timber and again permitted to become delinquent. One county has made five exchanges to relocate settlers. The larger blocks of tax deed lands are being used for the establishment of county forests and the lands are entered under the forest crop law.

Establishment and administration of county forests

To date but four counties have complied with legal procedure and qualified for the county forestry aid provided during the 1931 legislative session. There was, of course, no provision for the administration of such lands by the counties, though the conservation commission had a responsibility because the funds were paid over to the counties out of the forestry appropriations made to the conservation department.

As in considering lands for entry under the forest crop law, the conservation commission will permit for entry in county forests only such lands on which the soil, topography, and soil cover, together with the owner's pledge of practicing forestry, indicate that there will be a return to the state and the county sufficient to justify such entry.

Part I—Section 6

STATE PARKS

Introductory

Publicly owned and administered park areas serve a definite purpose in the complicated life of modern America. They provide recreation grounds for all of the people and preserve outstanding sites of historic or scenic interest.

Publicly owned parks come in various classifications. There are national parks, state parks, county parks, and city or town parks. Of these systems, city or town parks were the first to be established in America. Next came the establishment of national parks, then state parks, and more recently interest is developing in the establishment and maintenance of systems of county parks.

Wisconsin was the first of the states to express an official interest in the establishment and maintenance of state parks. In 1878, by legislative action, a tract of 50,000 acres in what was then Lincoln county was set aside as "The State Park." This existed without development of any sort until 1897, when again by legislative act the lands contained within "The State Park" were sold to lumber companies.

It was just three years after the failure of the first effort that the modern program got under way. Governor Edward Scofield appointed a committee in 1899 to investigate park possibilities in the St. Croix river region in Polk county, and acquisition of lands in this area began in 1900. The same year a park was established there in co-operation with the State of Minnesota which established a contiguous area on the opposite side of the river. The two areas are known as Interstate Park.

In 1907, sentiment for developing a state park system had crystallized to the point where the legislature of that year created the first State Park Board which employed a nationally known landscape architect to make a survey and draft a report to Governor James O. Davidson.

During the next few years two additional parks were acquired— Devil's Lake State Park in Sauk county, and Peninsula State Park in Door county.

With the growing co-operation between the various state agencies interested in conservation activities, there developed a close co-operation between the State Board of Forestry and the State Park Board. In 1913, by this co-operation, one forester and several rangers were directed by the State Board of Forestry to locate and construct roads and trails within the parks, and to prepare maps of the areas.

Two years later on July 1, 1915, the State Park Board, the State Board of Forestry, the Fisheries Commission, and the State Game Warden Department were consolidated to form the State Conservation Commission, and since that time administration of state park affairs has been under the jurisdiction of this commission.

There are three primary reasons for the establishment and maintenance of state parks. They are: (1) to preserve areas of outstanding scenic beauty of state wide significance; (2) to preserve places of historic interest of state wide significance; (3) to provide recreation grounds. The more of these reasons which can be fulfilled by a certain area, the more worthy is that area of being established a state park.

The third reason has been receiving most attention in recent years. This is partly due to the fact that most outstanding scenic wonders and spots of historic interest are already included within state parks, or for some reason cannot be so included. The tremendous increase in the amount of travel in recent years has been a vital factor in the demand for increased recreational areas for the public. It has also been a considerable influence in the determination of locations suitable for state parks. Obviously, location is not a major factor in the establishment of parks to preserve scenic wonders or places of historic interest. But in providing recreation grounds, location is frequently a determining factor. If the park is to serve the most people, it must be easily accessible to great numbers of people. Consequently, such areas should be located either closely adjacent to centers of population, or along principal travel routes.

Wisconsin today has 14 state parks, of which two are primarily of historic interest, 11 primarily of scenic interest, and one is both scenic and historic.

In recent years recreational possibilities of present and proposed state park areas have been receiving major consideration. This is particularly emphasized in a survey made by the conservation department recently of suggested state park sites. The purpose of the survey was to have a definite guide for consideration of all state park proposals in the future. The conclusion reached as a result of this survey was that future state parks be created on the following classes of land: (1) areas of distinct state wide significance because of their natural features, or because of their unique historical or scientific distinction; (2) areas of large size from five to 50,000 acres which embrace virgin forests and attractive lakes and streams; (3) areas in or near centers of population including the most rugged land and the best water frontage available for intensive development; (4) suitable roadside strips of old growth timber of suitable depth and extent.

The policy for the administration of any parks to be acquired in the future, as well as parks now included within the system, is to preserve the features which make each area distinctive, and to retain as much as possible of the natural and primitive conditions consistent with making parks accessible and useful in a recreational or educational way.

The recreational features of state lands other than parks, deserve mention. The state forests offer distinct recreational possibilities, particularly Northern State Forest and the Flambeau River State Forest. The recreational opportunities of such areas will be one of the considerations upon which selection of future state forests will be based.

Throughout all state parks it is a policy of the conservation commission to develop educational facilities coupled with wholesome, outdoor recreation. It is the belief of the conservation commission that state parks are primarily to provide outdoor rather than indoor recreation, and that the Coney Island type of development should be minimized and eventually eliminated.

In stating a policy for the administration of state parks, a word of caution is necessary to offset unwise enthusiasm which might result in the establishment of unworthy sites as parks. Of primary importance in the establishment of any state park is that the area under consideration be of state wide significance.

Another factor to be considered is the expense of acquisition and maintenance of state parks. The present state park system is both under and incorrectly financed. Moneys for state parks at present are taken from the conservation fund which means from moneys paid in by hunters and non-resident fishermen. It is an unjust diversion of funds to spend hunting and fishing license money to maintain state parks.

The conservation commission is wholly in accord with the principle of county park systems. There are many places in the state worthy of preservation which are not of sufficient state wide significance to warrant their being made state parks. Such areas should be included in county park systems. Closely related to this method of preservation of worthy sites is the establishment by counties of local camp and picnic grounds along highways, and the beautification of road-sides. Many counties in the state have done outstanding work in this regard. They should be commended and their efforts held up as an example to other counties.

Part I—Section 7

FISHERIES

Introductory

More attention was paid at an earlier date to fisheries work in Wisconsin than to any other phase of the conservation program. As early as 1874, the first fish commission was appointed and a small appropriation made which was expended in the hatching of fish at a private hatchery in the village of Dousman. In the following year, 1875, the first state fish hatchery was built at Madison. It is because of a continually expanding program of fish propagation and planting over a period of more than 50 years that there is still good fishing in Wisconsin even though the numbers of fishermen have increased greatly.

From the beginning there has been a spirit of scientific research in Wisconsin fisheries work. There has always been an unwillingness to accept standard practices as the best merely because they were standard. A constant searching for better methods has resulted in several discoveries of outstanding importance to fish culture work both in Wisconsin and elsewhere.

One weakness in the Wisconsin program which is just as characteristic of the programs throughout the United States, is that practically all effort has been expended on the production of fish and little on the protection of their habitat. This has led to an unbalanced program and in some places the situation has become so acute that although fish propagation agencies can and do produce fish by the hundreds of millions, the streams and lakes into which the fish are put are unsuitable. A well rounded fisheries program today must include protection and development of habitat as well as propagation and distribution.

During the past several years the general policy governing the Wisconsin fisheries program has been expanding to include more and more emphasis on the protection of habitat and even the restoration of natural conditions where necessary and possible. However, this expanded program which crystallized into definite action and several specific accomplishments during the past biennium, has not neglected propagation. It should be considered an expanded policy rather than a changed one.

The current propagation policy has stressed the rearing of all fish, which can be reared, to a larger size before distribution, and it has not cut down the total production of the hatcheries. There were more fish hatched and distributed during the past biennium than there have

ever been in a similar period in the entire history of Wisconsin's fisheries activities.

The trout rearing program was stressed during the biennium. No trout were planted when smaller than fingerling size. Based on previous experience which has proved practicable, work was continued in rearing trout to an adult size before distribution. The extent of this work was limited, however, by lack of finances. Under this policy some fish were planted which were of legal size and large enough to spawn. All such plantings of adult trout were made in the fall after the close of the trout season so that they would have an opportunity to spawn once, at least, before being taken.

An interesting angle of this policy for the rearing of trout to an adult size was the intensive stocking done in many of Wisconsin's larger trout streams. This intensive planting done during each of the years of the biennium is the beginning of an experimental program to determine whether such intensive stocking carried on over a period of years will restore these once famous trout streams.

The commission continued and greatly expanded its co-operative rearing policy with sportsmen's organizations. Under this policy many sportsmen's organizations in the state have built trout rearing ponds at their own expense in accordance with state suggestions. The state furnishes the trout, and the sportsmen's organizations operate the ponds during the rearing season which extends until after the close of the trout season in the fall. The trout are then planted in suitable streams in the locality in which the sportsmen's organizations operate. This policy results not only in the rearing of a larger number of trout than the conservation finances would permit if done entirely by state activity, but also in generating good will and harmonious relations between the conservation commission and Wisconsin sportsmen.

The distribution of fish continued under the policy followed for many years. Railroads operating in Wisconsin co-operate to the fullest extent in this program by hauling fish cars free of charge anywhere within the state. Particular appreciation is due to the Chicago and North Western Railroad which loaned to the conservation department the free use of two baggage cars during the entire fish distribution season. These two cars and the one owned by the department, were in continuous use throughout the fish distribution season.

During the second year of the biennium the conservation department followed a co-operative policy with the United States Bureau of Fisheries in distributing fish rescued from the Missisippi river bottoms. The federal government had money for rescue but none for distribution. The state department had distribution facilities but no money for rescue. Consequently, an effective arrangement was worked out whereby the federally rescued fish were distributed by the state.

The same policy governing the planting of state distributed fish was continued during the biennium. Fish are distributed for planting in response to applications sent in by individual citizens or sportsmen's



groups. These applications are considered with relation to the suitability of the streams or lakes into which it is intended the fish should be planted, and are filled in proportion to the number of fish available. Because of the greater interest in co-operative fish planting, the state was unable to fill all applications during either of the years of the biennium.

More care has been taken in selecting the lakes into which fish are planted this biennium than at any previous time. A recently completed lake and stream survey which is the most accurate compilation of the lakes and streams in Wisconsin is used in considering all fish applications. Fish are not distributed for planting in lakes to which they are not adapted. The result of this more scientific program will undoubtedly be noted within the next few years.

The conservation commission continued its co-operation with the Wisconsin Geological and Natural History Survey in the fish food studies being conducted in certain Wisconsin waters. It is hoped the information received from this study will prove to be of great value in the future.

Under the planting policy of the commission, stocking of fish is supervised by state men as much as possible. Of course, the extent of this supervision is limited by finances, but undoubtedly the more supervision which can be given to planting the more successful the plantings will be.

Probably the greatest fisheries accomplishments during the biennium were the activities under the expanded policy which looks toward the protection of habitat and the restoration of natural conditions. Included in these activities are the studies made in stream and lake pollution, the control of rough fish, the establishment of fish refuges, and the discovery and installation of the first successful fishway for lake species of fish.

The conservation commission is represented on, and makes its facilities available to the State Committee on Water Pollution. All state agencies having an interest in water pollution and its control are represented on this committee. This committee is working co-operatively with the cities or institutions which cause water pollution. These are the municipalities which have no, or unsatisfactory, sewage disposal plants, and certain industries which dump untreated wastes into public waters. The most important of these latter are the paper and pulp industries, cheese factories, canneries, etc. Representatives of most of these agencies are co-operating in the attempt to find methods of solving the stream pollution problem which will not be too burdensome to the municipalities and industries causing it. Considerable success has been attendant upon these studies.

Rough fish control has been continued under the existing policy. The principal species of rough fish with which the commission is concerned are carp in southern Wisconsin waters, sheepshead and lawyers in Lake Winnebago district, and suckers in northern waters. In southern Wisconsin, carp are removed by contracts with fishermen who pay the state a certain percentage of the proceeds of their catch.

The control work is carried on in Winnebago waters and in northern waters under specific allotment from the conservation fund. Control activities have been more successful and less troublesome during the past biennium than for any period in recent years.

The commission greatly expanded the policy of establishing fish refuges. Fish refuges are of three types, those established in the small feeder creeks tributary to larger trout streams, those established in lakes, and those established in places where fish congregate in large numbers to offer inducement to violation.

One of the outstanding accomplishments of the biennium in fisheries was the establishment of the first fishway which had proved successful in enabling lake species of fish to travel from the lower side of the dam to the flowage above it. Unless it be water pollution, there is no single cause so largely responsible for the decimation of fish supplies as the interruption of stream courses by dams.

Nature tells most fish to travel upstream to spawn. In nature a very small percentage of the eggs deposited by fish ever hatch or produce young fish. When natural conditions are altered as by the construction of a dam which will prohibit fish from reaching natural spawning grounds, the effect of natural reproduction is practically nil.

Fisheries agencies throughout the country have been searching for years for a successful fishway for lake species of fish. Wisconsin has been among the leaders in this kind of work. During the biennium the years of experiment and search were rewarded.

With the co-operation of the Wisconsin Highway Commission, the Public Service Commission, and interested citizens of Vilas county, the conservation commission was able to have a successful fishway installed in the Rest lake dam on the Manitowish river. It was understood that this installation was experimental. It proved so successful that the conservation commission made a survey and recommended that fishways of this type be established in many other dams in the state.

The demand for lake fish, particularly pike, in Wisconsin has reached the point beyond the production capabilities of the existing state hatcheries. Under present circumstances it is impossible for the state to establish any additional hatcheries. Consequently, a cooperative policy has been inaugurated whereby certain towns or counties may establish hatcheries to be operated co-operatively with the conservation commission.

The 1931 legislature charged the conservation commision with the responsibility of making certain investigations in connection with the commercial fishing industry. This is particularly concerned with the use of the submarine net and its effect upon fish populations. The investigation was to concern itself primarily with Door county waters. This investigation has been made.

Part I—Section 8

GAME

Introductory

Despite the fact that Wisconsin hunters have been paying license fees for many years, the state had never carried on any game production activities prior to 1928. In this year the conservation commission, under a new policy, created a division of game to develop a program by which the hunters of the state would be recompensed with more game for the license money they pay.

In many ways the game program began under more auspicious circumstances than has any other conservation program in Wisconsin. This is true because it is an activity which met with public approval because of its evident need and because of the opportunity of securing fundamental data upon which scientific game policies could be based. The old theory that all that was necessary to insure good hunting was to protect existing species, has fallen down. It has been learned that such things as food, cover, and vitality of species cannot be legislated.

The new game policy is comprehensive. It considers not only the production, distribution, and protection of native and exotic species, but also the protection and management of habitat. It covers all phases of a well rounded game program.

Prior to the present biennium a beginning had been made in several phases of the game program. These have been expanded and many new policies have been adopted. Of primary interest among the new policies is the game survey and the hunting and trapping census reports. To obtain an estimate of the game crop, it was necessary to take an inventory by a comprehensive game survey. Under this policy a survey organization has been formed which is composed of 600 competent observers including conservation wardens, forest rangers, individual sportsmen, and sportsmen's organizations. Periodical reports on game conditions are made by these game observers.

Also of primary importance is the policy resulting from the legislative action in 1931, which required each hunter to report on an individual blank his kill for each hunting season. The value of accurate information on the extent of the game crop may be grouped generally under four major heads:

- 1. It provides the conservation department and commission specific, accurate data on the regulation of game seasons, together with the better regulation of natural propagation and artificial stocking.
- 2. It provides the conservation department accurate, specific game information with which to advise the legislature.

- 3. It provides general information on waterfowl for the use of the federal biological survey.
- 4. It permits the Wisconsin Conservation Department to inform sportsmen and the general public on the value of the annual game crop.

Of similar importance is the information received and tabulated from the reports made by licensed trappers. The significance of such information is indicated in the results of the 1931 tabulation which showed that with the lowest fur prices in a decade, nevertheless the value of fur taken by licensed trappers in Wisconsin exceeded a half million dollars.

In order to establish an efficient game distribution and refuge policy, the game division conducted a survey which resulted in the establishment of four game districts. The classification is based upon native game supplies, conditions of cover and food, agricultural and other development, and possibilities for game management. This survey and the classification will enable efficient application of scientific game theories. Each district is classified according to primary and secondary game crops, both present and potential. It is for the development of these that refuges are being established in these districts.

The commission has adopted a policy to establish a definite refuge program which distinguishes between refuges and sanctuaries. A game refuge or wild life refuge is efficient only when it is stocked with species of game which will fill up a refuge area and overflow the boundaries to adjacent hunting lands. On the other hand, wild life sanctuaries are established for the protection and propagation of certain species of wild animals, birds, trees, shrubs, plants, or flowers. Refuges are primarily for the production, and sanctuaries are primarily for the protection of game contained therein.

The game policy also includes provision for the ultimate acquisition of public hunting grounds. The popular theory that in America hunting and fishing is public and free is based on a fallacy. Inalienable property rights protect all property—public and private. The right of public hunting has never existed except by the implied or granted consent of the owner of the land. This means that although the ownership of all game is vested in the state, the state has no right to enable its citizens to go on private property in pursuit of that game.

The very immensity of the American continent postponed the time when signs—no hunting, no fishing, and no trespassing—threatened to blot out those sports which should be considered the inherent right of every American citizen.

The numbers of hunters and fishermen are increasing every year, and the available hunting and fishing places are decreasing every year. Some solution to this problem must be found. For the sportsman without means the solution is to be found in public hunting grounds. The purchase or lease of public hunting grounds is inevitable under a modern game program unless hunting is to become

a rich man's sport only. Under the Wisconsin game policy a survey has been made, and desirable sites for public hunting grounds have been indicated in the hope that Wisconsin may soon begin an acquisition program of public hunting areas closely adjacent to the center of population.

The Wisconsin licensed shooting preserve law presents another partial solution for this seemingly impossible situation. The primary purposes of the Wisconsin licensed shooting preserve law are to produce more game birds, and to make it possible for landowners to realize a financial return for taking an interest in the production of game birds. Under the policy of administration of the commission this law should accomplish its purpose and at the same time improve hunting conditions throughout the state. The licensed shooting preserve law offers a greater incentive to farmers than to any other class of landowners. The policy of the commission considers them primarily.

Under the program developed on the policy of the production of game birds, the State Conservation Department owns, controls, or operates three state game farms. The primary plant located in Door county in Peninsula State Park, owned by the state, was begun in 1928, and it is here that most of the production is carried on. The primary policy of production is to provide substitute game for sections of the state in which native game has either diminished to the point where hunting for it is impracticable, or where natural environmental conditions have been so altered that native game cannot survive. The primary emphasis in production has been placed on the ring-neck pheasant.

While the major emphasis is being put on ring-neck pheasants, other species are not neglected. There has been continual experimentation carried on with other kinds of pheasants, and other species of birds. Of particular interest in the latter are the experiments with the wild American turkey, a bird once native to Wisconsin.

Much of the experimental propagation work has been done at the Moon Lake state game farm located in Fond du Lac county which is held under lease. Here also, experiments have been conducted in the propagation and release of waterfowl. This game farm is also the official waterfowl banding station for the state.

The general propogation policy of the conservation commission also includes an experimental project in co-operation with the State Board of Control, under which a small game farm was established at Waupun State Prison, operated with prison labor, under the direction of game experts furnished by the conservation department. Here emphasis has been placed on the production of ring-neck pheasants.

The general game program offers one of the most fruitful fields for co-operation of sportsmen, and the development of their good will. Sportsmen's organizations throughout the state have co-operated excellently in the hatching, rearing, and stocking of pheasants. Under this policy the eggs are furnished free of charge. The organizations usually distribute the eggs among farmers. After hatching, the pheas-

ants are kept more or less closely confined until they are released in the district in which the sportsman's organization operates. This has a double value from the co-operative standpoint. It not only develops the good will of the sportsmen, but helps to foster better farmer-sportsman relationships resulting from better acquaintance between the two.

Another co-operative activity is represented in the very extensive winter feeding programs of the last three years. Winter feeding of game birds is an essential activity if stocks are to be maintained in sufficient quantity to justify hunting. For the past few years the



Ideal location for winter feeding station. Note adjacent cover.

conservation department has been experimenting to determine the best methods of winter feeding. These have been determined and the department has maintained demonstration stations for the past few years, and has urged the co-operation of sportsmen and farmers in furthering the project. The department has made available to co-operators information as to the best methods of winter feeding, and has supplied a limited amount of money to assist in defraying the expenses of establishment and maintenance of the stations. The policy has proved very successful.

The general game policy has included research. This has concerned life studies of various Wisconsin species, cover restoration experiments, game management experiments, and experiments with the propagation of native species hitherto considered impossible to raise under artificial conditions.

Part I—Section 9

LAW ENFORCEMENT

Introductory

The primary consideration of all conservation laws affecting fish and game has been based upon the doctrine that man has the right to reduce things wild by nature to his possession. In earliest times this right existed without restriction. Modern conservation laws have added modifications and restrictions to it, but the fundamental doctrine still exists.

The old Roman law specified that animals in a wild state belonged to no one in particular, and that he who first reduced them to possession became their absolute owner regardless of whether the wild animals were taken on his own land or that of another.

In modern conservation laws the ownership of things wild by nature has come to rest in the state, and the state has assumed the responsibility of regulating how, when, and by whom such wild animals, birds, and fish may be reduced to possession. In addition, it has become customary for the state to charge a fee of citizens who hunt or fish.

The history of fish and game conservation laws in America reveals little evidence of plan or system. Although regulatory codes of some sort have existed in European countries for many centuries, little organized effort was made to regulate the taking of fish and game in America until the supplies became nearly exhausted. In fact, public consciousness regarding the taking of wild animals, birds, and fish came too late to prevent the total extinction of some species.

One after another each of the states and the several territories have drawn up and adopted codes of game laws since the middle of last century. Unfortunately, these early laws were social and political in nature rather than biological as they should have been. Rather than accomplishing their avowed purpose of protecting and developing wild life resources, they might be said to have set up a system of rules by which the remaining supplies of fish and game were to be distributed among any and all who might pay a fee.

In the past, conservation law enforcement has always been negative in nature. It has concerned the regulation of the individual with little regard for the multiplicity of individuals.

In the past it has been considered that the greatest benefit which could be derived from conservation law enforcement was in the amount of game conserved or saved by the prevention of violation or the punishment of violators. However, there is a greater benefit to be realized from conservation law enforcement than this negative saving or

conserving of relatively small amounts of game from individual violators. The greater benefit is positive, not negative in nature.

Most game and fish conservation agencies are operated upon revenues received from the sale of licenses. Conservation law enforcement protects the legal privilege of the state to collect a fee for the right to reduce game (a public property) to private possession, as much as it protects fish and game. Without conservation law enforcement few funds would be received from the sale of licenses, and bag and season limits would be a farce. Considered from this positive angle, law enforcement assures the means of operating modern game and fish production, distribution, and maintenance activities.

Thus it is seen that if it is to be most successful, law enforcement, inherently negative by nature, must produce positive results. Probably the largest and most important job of conservation officers today is to arouse in local people a sense of local responsibility, and to stimulate in them the desire to co-operate. Conservation law enforcement will be successful in itself, and by being successful will assure the future of the positive programs dependent upon it, in direct proportion to the amount of co-operation received in each locality. The practice of conservation must become popular and spontaneous with local people if law enforcement is to be successful. Legal force alone cannot accomplish the desired end. Morality and right doing cannot be legislated.

Active conservation law enforcement in some measure has been practiced in Wisconsin since April 12, 1887, when the first law creating offices for four game wardens went into effect. Two days later another act provided for the appointment of three citizens of the state as fish wardens, primarily to supervise commercial fishing on the Great Lakes. Four years later the offices of fish wardens and game wardens were abolished and there was created the office of the State Fish and Game Warden, who had the authority to appoint one or more deputies in each county, supported by fees.

This form of administration continued for 24 years with new fish and game wardens appointed biennially. The scope of the department's activities increased with the passing of the years. One interesting addition to the duties of the deputy wardens, and one which was prophetic of the change to come with the years, occurred in 1898 when all deputy fish and game wardens were declared to be deputy forest fire wardens.

In 1915, this department was absorbed into the newly formed State Conservation Commission which also took over the duties of the State Board of Forestry, the State Park Board, and the Fisheries Commission. The first conservation commission was composed of three executive commissioners under whose supervision the various conservation activities were carried on.

In 1915, the title of the conservation law enforcement officer was changed from game warden to conservation warden. With the change in name is a change in meaning, symbolic of the policy of the present

conservation commission, to have each field officer a true and worthy representative of the commission.

The selection of conservation wardens in Wisconsin has been on the basis of competitive examination since 1905. In recent years the examinations have been made much more stringent and comprehensive in order to improve personnel.

Today the law enforcement policy of the conservation commission stresses the prevention of violation rather than the punishment of violators. However, in placing emphasis on the former, the latter is not neglected as the records for the years will show. Such a policy emphasizes the positive rather than the negative angle of law enforcement.

There are two types of violators with whom conservation officers come in contact. These are the casual or accidental violator, and the vicious, intentional, or commercial violator. With the first class it is felt that if violations can be prevented, more good is accomplished for conservation than if such unintentional violators were punished. For the second class, however, there is just one method and that is punishment as swift and severe as possible.

The new policy of the commission in regard to law enforcement and officers does not consider the efficiency of the men merely on the number of arrests they make. Rather, the men are judged on the efficiency with which they handle cases and seizures, on their citizenship and personal appearance, on their co-operation with other divisions, and on their care in making reports and answering inquiries.

The conservation commission realizes that its warden force is inadequate in numbers. A larger force of competent men is needed. With insufficient funds to provide more conservation wardens several methods of increasing the force without additional expense have been considered. Principal among these considerations has been the appointment of unpaid special or voluntary wardens. However, the experience in the past, both in Wisconsin and in other states, has indicated that the evils inherent in a system based upon the granting of authority without responsibility, far outweighed the merits. Once entered into, such a system is most difficult to handle.

During the biennium the commission adopted a policy which resulted in considerably enlarging the warden force without additional funds. This was accomplished by granting conservation warden authority to employes of the conservation department in other divisions. The men so appointed were forest rangers, district forest rangers, and area fire wardens. Under the policy, men receiving the authority are particularly active during times of special need such as the deer season.

Part I—Section 10

PUBLIC RELATIONS

The success of any public movement is directly proportionate to the amount of public interest, favor, and co-operation it can generate. This is particularly true with a great public program like conservation which affects such a large majority of citizens of a state.

Looked at from a long time angle, it has been exceedingly difficult to develop favorable public opinion toward conservation. Before it could be developed, it meant that a public psychology of several generations' standing had to be completely overcome. This was the psychology or frame of mind created by the cumulative effect of three centuries of settlement made easy by free self-appropriation of natural resources. Never in the history of the world had a people settled on a continent so bountifully endowed with all resources necessary for a complete existence, and never before in the history of the world has there been such exploitation and destruction of natural resources as there has been in America.

A few far-sighted pioneers foresaw the inevitable in the middle of the nineteenth century during the very height of the exploitation. These men realized that that which had been considered inexhaustible really could be exhausted. Forests, game, and fish could disappear.

But these few men were not generally heeded. They were hailed as visionary and the exploitation continued to run rampant. It was not until almost irreparable damage had been done in many sections of the United States that a conservation feeling became at all general.

As far as factual knowledge is concerned about the damage of continued destruction of natural resources, there was almost as much available 70 years ago as there is today. The experience in the East and in European countries indicated the folly of continued reaping without sowing.

An excellent example of the occasional warnings against continual destruction of natural resources is revealed by the report of a special committee of the Wisconsin legislature in 1867 which decried the destruction of forests then in almost the same terms used today. But the work of the committee accomplished little and it was not until most of Wisconsin's forests had been destroyed that public consciousness awoke.

A more recent and more striking example of the effect of public opinion may be seen in the antagonism toward a forestry program in Wisconsin within the last two decades and how it led to the cessation of forestry activities by the state in 1915. It is only very recently

that the public opinion which now favors conservation has been developed. Wise conservation measures and efficient administration, both in Wisconsin and in the nation, are now slowing up the destructive program. But a more general favorable public opinion is necessary before we can stem the tide.

Destruction still exceeds production. This situation must be changed. If natural resources are to remain a bounty to man, man must produce and protect more than he destroys.

This favorable public opinion may be expected only when there is a general understanding of conservation problems. Such understanding can come only with education. Until a very few years ago conservation education in Wisconsin was a haphazard venture. To correlate existing conservation educational activities and to inaugurate and administer new ones, the conservation commission in 1928 provided for the present division of public relations.

At the time of its creation, the idea for such a division was new in the Middle West. Although the field for work was unlimited, there was no precedent of method and new paths of endeavor had to be developed. Since the time of the establishment of this division in Wisconsin, more than a dozen similar divisions have been established in conservation departments of other states.

The objectives of the new division were threefold. First, the education of Wisconsin people in conservation matters to generate a sympathetic and co-operative public opinion; second, the dissemination of information regarding Wisconsin's recreational advantages to prospective visitors outside the state; and third, the centralization and correlation of the conservation publications by the state. The educational phase is paramount and its ramifications touch both the other primary purposes.

From the first the educational policy of the commission has been to make available to the largest number of people as much information about conservation problems in as attractive a form as possible. In the establishment of an educational program it was realized that all possible avenues of approach to the public must be utilized. Although the success of the conservation educational program lies principally in the future, it must deal today with those beyond the reach of schools. Consequently, the educational program includes newspaper and magazine publicity; weekly and monthly releases from the department; public talks; still and motion picture photography; publication of books, bulletins, and pamphlets; participation in displays at fairs, outdoor shows, and conventions; and the maintenance of an extensive information service.

The Wisconsin public and the agencies used to reach it have been extremely receptive to the conservation educational program. School systems, newspapers, news services, radio stations—all these and other educational media have co-operated.

A vital phase of the educational policy of the commission is to disseminate as widely as possible full information regarding conservation laws with the hope of preventing violation of them. This policy was extended to include the publication of names and addresses of violators on the theory that many people who might violate the law if they thought there would be no public knowledge of their actions if apprehended, would be restrained by the fear of unfavorable publicity.

Publication of information about laws breaks down one of the barriers normally existing between the public and enforcement agencies. Far too few people realize the purpose of conservation laws. They think that restrictive measures in game and fish conservation, for instance, are merely to make hunting and fishing more difficult. Publication of the reasons for conservation laws cannot help but bring about a more general understanding with the resultant more general abidance. A case in point is the buck law for deer. More general public acceptance of this law was noted during the 1932 deer season than ever before because more hunters realized the biological necessity for such a law.

In an ever increasing degree the emphasis on the conservation educational program will be centered in school. Care has been exercised and will continue to be exercised, however, not to antagonize educators by the infliction of additional courses into already over-crowded curricula. Rather, the educational policy for schools will be to make conservation educational material interesting enough and attractive enough so that it will be welcomed by teachers and students alike as correlative material to courses already existing in all Wisconsin school systems.

Wisconsin's leading single industry is recreation. It is this recreational industry which finances much of the conservation program. Because of this the conservation commission felt it necessary to have as part of the policy governing the division of public relations, the dissemination outside the state of information about the attractions of Wisconsin.

Photography and photographic exhibits offer one of the best media, both for conservation education and for advertising. The policy of the commission has been to present photographically as many of the conservation activities and scenic attractions in Wisconsin as possible. This policy included not only production by the department itself, but co-operative agreements with other agencies. The Milwaukee Public Museum particularly has been co-operative in this regard.

Probably the most effective method of advertising Wisconsin's recreational resources is through participation in outdoor shows, fairs, and exhibits. An unusual opportunity in this regard will be afforded by the Century of Progress Exposition in Chicago in 1933. The conservation commission holds itself ready to co-operate in advertising Wisconsin's recreational resources at this world's fair.

Part II—Section 1

ADMINISTRATION

Finance

As a co-ordinating agency between all protecting, producing, and educational divisions of the conservation department, the division of administration has finance as its chief concern including collection of funds, budgeting, and accounting. Among its other duties are general office management, compiling and keeping records and reports for all divisions, sale of licenses, conducting special investigations, management of rough fishing contracts, and maintaining legislative contacts.

Aside from special appropriations for forestry activities, all revenues of the conservation department are derived from the sale of licenses or from the state's share from co-operative contracts. The principal source is the sale of licenses. As specified by law, licenses for various activities are sold either by county clerks and regularly authorized agents, or direct from the office of the department at Madison. There are 25 specific licenses which are sold by the conservation department.

The conservation department receives approximately a half million dollars a year from license sales, and exclusive of specific appropriations. This constitutes the conservation fund. All conservation activities except forestry are financed from this fund. The general economic depression of the past few years has multiplied the usual difficulties incident to the sale of licenses, and administration of this source of income has become correspondingly more difficult.

During the biennium the entire task of budgeting all disbursements was given the conservation department by the legislature. Hitherto the legislature had made specific appropriations out of the conservation fund for the various activities of the department. But the legislature of 1931 allotted to the conservation commission all moneys in the conservation fund to be budgeted among the various activities by the commission itself. While this is the correct method, it did add to the work of the division.

During the past year a decided improvement has been made in the accounting system in the forestry division. Prior to July, 1932, an appropriation was made to the conservation department for forestry purposes, but this appropriation was not budgeted to the various forestry activities or districts. Consequently there was no uniform system of accounting in use in the several field headquarters. The result was that some districts would be in a position to over-supply their needs while others might be short on supplies and equipment. Further, the department might be in an embarrassing position at the end

of the fiscal year by having to curtail its activities due to the rapidly shrinking appropriation balance.

Under the new system, expenditures for each forestry district are divided into 18 activities. These are: (1) salaries—permanent; (2) salaries—temporary; (3) travel expense; (4) rent, fuel, light, and water; (5) postage; (6) telephone and telegraph; (7) express and freight; (8) gas and oil; (9) expendable supplies; (10) tools and equipment; (11) maintenance—trucks and trailers; (12) maintenance—motor pumps; (13) maintenance—telephone lines; (14) maintenance—towers; (15) maintenance—buildings; (16) maintenance—roads, trails, etc.; (17) maintenance—other improvements; (18) new construction.

Before the beginning of the fiscal year, each district ranger submits his allotment estimate for the year. This estimate is supported by a memorandum showing in detail the proposed expenditures for each activity including names of men to be employed under permanent salary, number of men and rate of pay of those to be employed under temporary salaries, and a detailed estimate of travel expense.

These allotment estimates are considered by the director, and the revised and approved amounts and schedule are returned to the district forest ranger. Upon receipt of the approved budget the district ranger sets up each activity on a card he has for that purpose containing a space for the original allotment and for any allotment increases or transfers. This also contains a record of each disbursement against each activity, always showing the unexpended balance. A card for each maintenance activity has a column for each truck, tower, telephone line, building, or whatever the maintenance activity may be, showing the detailed cost of maintaining each of these activities.

At no time is a district ranger authorized to increase the allotment for an activity or transfer from one activity to another until he first has the approval of the director. At the end of each quarter each district ranger sends a form provided for that purpose, to the Madison office showing the status of each activity; i. e., the amount of allotment, bills paid, outstanding liabilities, and balances in that particular allotment. These quarterly statements are then checked against the allotment disbursement record in the Madison office.

This new budgetary system has met with marked success. It has been copied for use in other states, and since it has proved so successful in budgeting the forestry activities of the Wisconsin Conservation Department, the same system will be installed in the park, game, and fisheries divisions at the beginning of the next fiscal year.

Special investigation

The 1931 legislature directed the commission to make an investigation on the use of certain nets for commercial fishing in Great Lakes waters, and to report to the 1933 legislature.

At the direction of the commission, the division of administration

conducted this investigation. The following letter indicates the findings:

January 20, 1933

To the Honorable, the Senate:

Pursuant to section 29.33 (13), subsections (a), (b), (c) and (d), report is herewith submitted in compliance with the directions of this section.

As directed by the legislature, the necessary co-operative investigation was made, on the basis of which this commission promulgated regulations prohibiting the use of any submarine or deep water trap nets in Door county waters. This regulation was defeated by fishermen through the reconstruction of their nets. Thereupon the commission promulgated further rules and regulations defining and describing nets, the use of which is legally authorized and licensed by the commission under section 29.33, paragraph (3) of the statutes.

Representatives of the commission have conferred with representatives of the United States Bureau of Fisheries and of the conservation departments of the several states bordering on Lake Michigan and interested in the commercial fishing industry of that lake. Unless immediate drastic remedial steps are taken through the enactment of protective legislation there is great danger of the complete destruction of the whitefish in Wisconsin waters by the use of deep water trapnets, submarine nets, long tunnel pound nets or nets of similar description.

The attorney general has recently called the attention of the commission to the inherent weaknesses in the existing laws of Wisconsin dealing with deep water trap and similar nets.

There is submitted for your consideration a bill covering the recommendations of this commission to remedy the existing unsatisfactory situation.

Very truly yours,

STATE CONSERVATION COMMISSION, (Signed) HASKELL NOYES, Chairman.

The proposed bill prohibits the placing, setting, or operating in Green bay, Lake Michigan, and Lake Superior waters any submarine net, deep water trap net, long tunnel pound nets, or nets of similar design. The bill further provided that the possession of any such nets should be deemed sufficient evidence of the use thereof and that such nets were contraband.

Records and reports

All records and reports of all divisions are maintained by the division of administration. These include budgeting and accounting records of payrolls of all divisions, all forest protection and reforestation reports, state park records, law enforcement reports including arrests and seizures, and game and fisheries production and distribution records. The detail of all records and reports will be found in Part III of this report.

Unemployment relief

The operation of the special unemployment relief program during 1932, added greatly to the work of the division of administration in

which the direction of the whole program was centered. The administration of this program also added greatly to the work of compiling and keeping records as detailed reports were made of each project.

Bounties paid on wild animals

Investigation of all suspicious claims resulted in the reduction of bounty payments approximately \$50,000 during the second year of the biennium. During the three years prior to the present biennium approximately \$80,000 was paid out in bounties each year. This was reduced to \$25,550 in the second year of the biennium.

The new bounty law also contributed to the reduction. Under the new law the payment for mature wolves was reduced from \$30 to \$20, and the payment for wolf cubs was increased from \$4 to \$10. This resulted in increased hunting and taking of cub wolves.

Legislation

The division of administration acts as a clearing house for all suggestions for new or revised legislation which come to the conservation department and commission either from within the organization or from the public. All such suggestions are grouped and codified and record is kept for the benefit of the legislators.

Part II—Section 2

FOREST PROTECTION

The calendar year 1931 will probably be regarded as the turning point in Wisconsin's forest protection history. It was during this year that the conservation department had for the first time an adequate appropriation with which to build up and equip a forest protection organization. Two factors contributed most to the development of public opinion resulting in the legislative appropriation.

The area under forest protection in the state had been nearly doubled in the five years preceding 1931. With inadequate personnel and equipment, the new districts could not be efficiently organized. The forest protection organization was caught short-handed with the advent in the fall of 1929 of one of the most severe droughts in the history of the country. The drought continued and increased in severity from the fall of 1929 until 1931. The apparent increase in the number of fires due to better reporting over a considerably expanded area, coupled with the real increase in number and severity caused by the drouth and depression, crystallized public opinion, resulting in a demand for more efficient forest protection.

In the fall of 1931, the forest protection organization was completely reorganized, decentralizing control from the Madison office. The 11 forest protection districts were grouped into four areas, retaining the district offices but subordinating them to an area warden in charge of each area. The building up of the personnel and equipment begun prior to the reorganization was continued with increased vigor.

General situation

The three years' drought reached its peak in 1931. Following the exceedingly high hazard of 1930 came a winter of light snowfall, so the dead vegetation was not matted down. The spring of 1931 was more like a continuation of the preceding fall fire season than like a new season of hazard. Fires were reported as late as November in 1930, and as early as the middle of February in 1931, an unprecedented situation in Wisconsin.

In the spring of 1931 two local residents lost their lives in a fire in an area with which they were thoroughly familiar. All previous fires in Wisconsin which have taken human lives have been fall fires.

The hazard of the prolonged drought reached peaks on April 12 and April 18. High southwest winds and extremely low relative humidity prevailed on both days. On April 12, a dust storm blotted out visibility so that towers became useless. On these two days fires crossed the Wolf and Wisconsin rivers as though no obstacles existed.

In April of 1930 there were 1,122 fires, and 603 in May, as compared with yearly totals of 430 fires in 1928 and 960 fires in 1929. From early June to the middle of September, 1931, the hazard was normal and heavy rains in September and October wiped out the usual fall risk. There was a total of 2,340 fires which burned over 640,979 acres, or 274 acres per fire. The total damage to land and forest growth was \$421,500.

In 1932, subnormal precipitation in the winter and spring did much to reduce the benefits of the heavy rains of the preceding fall. The continued economic depression also contributed to the severity of the fire hazard in a marked increase in fires of incendiary origin. The fire season of 1932 began later than in 1931, and no month of 1932 was as severe as April of 1931. Only three fires were reported in March, as compared with 23 in March of 1931. In April there were 804 fires and 455 in May. The fire hazard in 1932 continued throughout the summer and fall, resulting in a total of 3,168 fires for the year. However, this increase in number was both real and apparent, as better detection methods resulted in a larger number of small fires being reported.

The results of the increase in efficiency in the forest protection organization is indicated in the smaller area burned over, smaller acreage per fire, and greatly reduced damage to land and forest growth.

In 1932, 3,168 fires burned over 119,458 acreas, an average of only 38 acres per fire, as compared with 274 acres in 1931. The fires in 1932 burned over but .91 per cent of the area under protection, as compared with 4.89 per cent in 1931. The total damage done to land and forest growth by fires in forest protection districts was \$69,320, a great reduction from the \$421,500 done the year before. The reduction in damage by fires is a direct result of an increase in cost of protection, which was 3.03 cents per acre in 1932, as compared with 2.09 cents per acre in 1931. The increased cost of protection is considerably less than the saving resulting from the reduced damage.

The benefits of the unemployment relief program administered by the conservation department in 1932 are also reflected in the reduced fire damage. The network of fire lanes and fire roads developing in 1932 proved their worth, as did the materially augmented personnel and equipment.

Revision of districts

Several minor revisions of districts were made during the biennium and official legal publication was made for all districts. No changes were made in District 1, but the south boundary of District 2 was changed to eliminate some agricultural lands. In District 6 the south boundary was revised to eliminate four and one-half townships of agricultural land in Taylor county. In District 7 two and one-half townships of agricultural land in Chippewa county were removed, and three townships of agricultural land in Lincoln county

were removed from District 8. In District 9 one township in northern Waupaca county was added and in District 10 one township in Eau Claire county and one in Clark county were added.

Two townships were added on the southern end of District 11, three-fourths of a township in Sauk county and one and one-fourth townships in Columbia county. On the eastern side of District 11 two and one-half townships in Portage county were added.

Payment of fire fighters

Delay in the payment of fire fighters was one of the greatest weaknesses of the organization in the fall of 1930. It resulted from the fact that the rangers were overburdened because of the extremely bad fire season and had to neglect pay rolls to fight fires. This problem was met in 1931 by employing a dispatcher in each district office. While his primary duties were to handle the fire reports coming from the towers and dispatch crews to each fire, he was also available for such work as making out pay rolls and vouchers in proper form. Other state agencies having to do with the issuance of checks co-operated in speeding payment of fire fighters. As a result, fire fighting payment was prompt, despite the serious spring fire season.

It was charged that persons were setting fires to secure employment. Actually loafing on the job to prolong employment was the greater evil. In any event, it was realized that payment above the going wages in any community was not a wholesome situation. As a result, the rate of pay for fire fighters was set at 25 cents per hour. This is not to be interpreted as wage cutting, since fire fighting can not be considered as a means of earning a living. Such payment must be regarded as compensation for effort in protecting the resources of the community.

Field personnel

The field personnel was numerically inadequate to the task in years of high hazard, and training had been extremely limited. As much instruction as possible was crowded into a two day meeting of the district rangers which was held at Merrill on March 27 and 28, 1931.

As soon as increased funds for forest protection were assured, arrangements were made for conducting an examination for forest rangers. It was agreed that outstanding men from the eligible list could be used to fill vacancies in the position of district ranger. Two existing vacancies were filled and two of the former district rangers were replaced by men secured through this examination.

Preceding the fall fire season, temporary forest ranger appointments were made from the eligible list. Some of these men are now serving as acting district rangers, replacing those designated as area wardens. A number of them received permanent appointments before spring, working toward the personnel plan as given in the budget. To a considerable extent dispatchers and towermen were selected from the forest ranger eligible list.

A request was made to the State Chief Engineer to assign a competent structural engineer to inspect lookout towers. This inspection revealed that much improvement and replacement work would have to be done under technical supervision, and the engineer was transferred to the forest protection division.

Early in September the area system was introduced, and the state forester, the chief fire warden, and two district rangers were designated temporary area wardens. At the close of the season, four of the outstanding district rangers were appointed as area wardens.

During the fall fire season two locomotive engineers were given temporary appointments as locomotive inspectors to guard against the setting of fires by defective equipment.

Several of the temporary appointments of 1931 were made permanent in 1932 and several new rangers were added. At the close of the biennium in addition to the area wardens and 11 district rangers, there were 52 rangers and 11 dispatchers employed on a ten months' basis.

Equipment

Shortage of funds restricted the purchase of equipment prior to July 1, 1931. The chief purchase was 17,600 feet of one and one-half inch rubber lined hose, and several lengths of suction hose. This purchase was imperative to assure service from the meager pumping equipment then on hand. When the new appropriation became available, 22 new pumps were purchased. This order provided one type N and one type U pumper for each district, except in Districts 10 and 11, which received two type U pumps, since greater accessibility and the presence of more peat made models of less portability but greater capacity more desirable.

The type U pumper with its 88 gallon per minute capacity at 140 pounds pressure and the greater reliability and longer life inherent in a four-cycle motor, proved very effective.

One unit Siamese valve and two nozzles for each type N, and two Siamese valves and four nozzles for each type U pumper were provided for use with these portable pumps. The hose totaled 35,800 feet, or practically seven miles, and like the former order was of underwriter's standard fire grade and equipped with forest service or rocker lug couplings. The combination spanners, two for each pump, fit both this improved coupling and the pin lug coupling on the hose bought in previous years.

Difficulty in actually putting out peat fires and the excessive suppression costs made it clear that a volume of water was required far in excess of the capacity of portable pumps. Specifications for a unit to furnish this volume of water had been prepared with the cooperation of the agricultural engineering department of the University of Wisconsin the previous winter. The unit was assembled under its supervision, using a six cylinder Waukesha motor directly connected to a 400 gallon per minute two-stage centrifugal pump and

mounted on a four wheel highway trailer. It was equipped with generator, battery, and a large spotlight, making it possible to string out or re-lay hose at night. This makes it possible to profit by the cumulative effect of continuous pumping. The unit soon proved its value. On one large peat fire in District 11 the unit was in almost continuous operation for five days and three nights.

The pump has two outlets. It is provided with 1,500 feet of two and one-half inch hose with standard fire hose coupling, two nozzles with one and one-eighth inch orifice, and a reducing Siamese coupling. This latter fitting makes it possible to make two leads of the one and one-half inch hose from the end of the two and one-half inch hose.



New peat fire fighting unit developed in 1932.

and of course, the smaller Siamese couplings can be used on these. The pump will supply four or more of the smaller nozzles a mile distant.

Shortly after July 1, bids were taken for 11 half ton trucks each with special box body, and three one and one-half ton trucks each with stake body and six foot wide platforms since the standard seven foot platforms had proved to be too wide for use on narrow woods roads. Each district received one of the half ton trucks, and a one and one-half ton truck went to each of the three districts which were below the standard of the other districts.

In the fall of 1931, and during 1932, considerable major equipment was purchased. This included 11 crawler type tractors, 22 half ton trucks, 24 one and one-half ton trucks, 11 plows, 12 additional Pacific Marine pumpers type N, and 15,400 feet of hose. Supplies of fire

fighting tools and minor equipment were considerably augmented during the biennium.

Complete details on forest protection equipment and tools will be found in Part III of this report.

The tower program

The forest protection organization made great progress in the tower program during 1932. Following the complete inspection in the fall of 1931, work began early in the spring on building new towers and rebuilding and strengthening towers, both on old and new locations. In all there were 15 new towers of the specially designed Wisconsin type erected on old locations replacing abandoned towers of unsatis-



New district ranger headquarters at Hayward.

factory type, 14 new towers built on new locations, three rebuilt towers erected on old locations, and 10 rebuilt towers erected on new locations. All other towers were strengthened according to need. At the end of 1932, the forest protection organization had 108 towers, an increase of 19 over the preceding biennium.

New maps

A map division was established within the conservation department to co-ordinate all map making activities, and to develop standard maps of all districts. New tower maps for each location were also prepared.

Buildings

Two new district headquarters were begun in 1932, at Black River Falls in District 10, and at Wausaukee in District 5. One new ranger station, five garages, and 10 tower cabins were built during the year.

Telephone system

There were 339 miles of state owned telephone line constructed during the biennium, bringing the total to 935.4 miles. In addition to this state owned line, 40 miles of state telephone wire was strung on other poles, bringing this type of telephone connections to 205.8 miles. At the close of 1932 the forest protection organization had available 1,141.2 miles of telephone line.

Weather records

Weather recording stations were set up at each district headquarters in co-operation with the United States Weather Bureau, which furnished a daily fire weather report which is compiled in part from information provided by the organization. Information resulting from weather records compiled at the various district headquarters will prove of increasing value.

Part II—Section 3

UNEMPLOYMENT RELIEF

Introductory

Of the \$8,000,000 state unemployment relief program in 1932, \$500,000 was allotted to the conservation commission to relieve the distress of the unemployed and to augment the facilities for forest protection. This money was expended by the State Conservation Department under a policy approved by the commission.

The appropriation was made by the special session of the legislature in February. Work was begun under the program the middle of the same month within three days of the time the first part of the money was made available. This program continued until the end of the year, at which time \$464,221.08 had been expended, of which \$396,691.98, or 85.45 per cent, was spent for wages. These wages were received by 12,790 workers who had 40,209 dependents.

These figures indicate that the primary purpose of the legislation to relieve the distress of the unemployed was followed. To make this relief feature as widely effective as possible, the policy was to choose the types of work which would provide a maximum amount of labor. No expensive equipment was purchased. All of the money which did not go for wages was spent for the purchase of hand tools and materials.

The conservation department had information at hand as to what kind of work should be done and the districts most in need of it, both from the standpoint of unemployment relief and of forest protection. It was this knowledge which made possible the early beginning of the program.

Fortunately, the greatest need in augmenting the facilities for forest protection, of making forest areas accessible to fire fighting personnel and equipment, could be answered by the type of work which would require the maximum amount of hand labor. This helped decide the type of projects upon which the money would be expended. In developing the policy, which the commission approved, the conservation department set up the type of projects which were provided for by the law. These included the construction of fire roads, the construction of fire lanes, the employment of labor necessary to construct telephone lines, ranger headquarters, substations, lookout towers and warehouses, and the employment of labor for the construction of small necessary connecting road lengths between existing roads and the new network.

Wisconsin's forest protection system is divided into 11 forest protection districts, each of which contains from 800,000 acres to 1,500,000 acres. In all there are 18,600,000 acres contained within the forest

protection districts. Each district is under the supervision of a district forest ranger. The 11 districts are grouped into four conservation areas, each headed by an area warden. It was this field organization under the direction of the department office at Madison which administered the unemployment relief program.

In the selection of projects, the conservation department was guided by the recommendations of the field men and by conferences with local officials and a legislative committee to determine the relative need of the communities for relief as well as the relative need of the forest areas for augmented protection facilities.

Throughout most of the area included within forest protection districts in Wisconsin are networks of old roads, left overs from earlier logging days. These consist of logging railroads, tote roads, and old



Bridge and fire road constructed during the unemployment relief program 1932.

sleigh haul routes. These old systems of roads were utilized to as great an extent as possible in building up the new system of forest protection roads and lanes. In many instances all that was necessary to make serviceable fire lanes and roads was to brush out old rights of way, do a little grading, remove ties, or put new planking on old bridges.

From the beginning it was not intended to have the fire roads constructed under this program become parts of any road systems. They have been considered as single purpose improvements only and are not for public use. Consequently, both the fire roads and fire lanes constructed under this program are closed to the public at times of fire hazard. Gates or chains have been put across entrances to such new fire roads or fire lanes. Short connecting road lengths, where it was advisable to utilize existing town roads, are not closed to the public. When the new fire roads have been built upon existing roads

which had been used by farmers or settlers to get to their homes, these farmers or settlers have been granted access to the roads.

Unlike unemployment relief programs in some other states, the primary purpose of the Wisconsin program was to provide local relief. Consequently, in the employment of labor preference was given to the local family wage earners and no one was employed who had not been a resident of the state for at least six months. Both the length of employment and the number of persons employed from one family was limited, and crews were rotated at 10 day intervals to obtain the widest possible distribution of relief. The co-operation of local town and county officials was of value to the department in determining the relative need of the various unemployed people.

Because preference was given to local labor, it was unnecessary, except in a very few cases, to establish camps. This also tended to make higher the percentage of the appropriation available for labor.

In establishing the wage scale several factors had to be considered. It was desirable to spread employment as far as possible and not to pay high enough wages so that it would be to the advantage of any individual to quit another job to partake in the relief program. At first a wage scale of 25 cents per hour for common labor, and 40 cents per hour for foremen was established. The eight hour, five day week was also adopted. After several weeks' experience, and after conference with the State Industrial Commission, the wage scale for common labor was increased from 25 cents to 30 cents per hour, but the original policy was adhered to in other respects.

It was the thought of the conservation department that to make the relief feature of the program as widely and immediately felt as possible, a large number of projects in a large number of counties should be set up and worked upon as quickly as possible. In all there were 416 projects set up in 30 counties.

The final report of the conservation department to the Governor and the legislature on this unemployment relief program reveals some interesting figures. Of the total amount paid for labor, \$396,691.98, or 85.45 per cent of the total money expended, \$348,181.06 represents wages paid to foremen, operators of trucks and equipment, and laborers. Teamsters received in wages \$41,062.25, and the amount spent in camp, board, and keep was only \$7,448.67. One reason the camp expenditures were not greater was the co-operation received from the Wisconsin National Guard, which loaned to the conservation department for this program, camping equipment as well as some trucks to provide transportation.

By far most of the men employed were taken from the immediate locality of the projects. Final tabulation indicates that 63.59 per cent of the total number of persons employed resided in the town in which the project was located; 19.30 per cent from nearby towns; 13.90 per cent from nearby cities located within the same county; and only 3.21 per cent of the total amount of labor was employed from counties outside those in which the projects were located.

From the beginning it was planned to give preference to local family wage earners temporarily unemployed or partially employed. It was further planned to rotate crews to spread the relief feature as widely as possible. It was suggested that labor from large cities in non-forested sections of the state be imported to participate in the program. However, the low wage scale and the short time of employment made this inadvisable and consequently it was not done.

The average period of employment was 12.9 days for the 12,790 men employed, and the average amount received per man was \$31.02.

The section of the final report of the unemployment relief program lists under the heading of work accomplished, 1,020 miles of new fire roads and 342.2 miles of fire lanes. In addition to the strictly defined fire roads and fire lanes there was much fire hazard elimination work done. This included 103.5 miles of snag cutting; 81.5 miles of road slash burning; 190 miles of telephone line brushing; and 30 acres of slash on state park eliminated. In the construction work the labor was furnished for the building of 21 new lookout towers; 12 lookout tower replacements; and several tower relocations and tower repairs. The labor necessary for the construction of several forest protection substations, garages, and warehouses was also paid for from the unemployment relief program money.

Detailed statistical information of the entire unemployment relief program will be found in Part III of this report.

A consideration of the work done under this Wisconsin unemployment relief program in forest areas might bring to mind the old adage "It is an ill wind that blows no one good." Undoubtedly the widespread economic depression has brought about unemployment relief programs which have been of great benefit to forest protection. These will probably continue and may even be expanded greatly in scope, both by national and state efforts.

In the Wisconsin program it was attempted to emphasize the relief feature as much as possible, and at the same time do constructive work in augmenting facilities for forest protection. This has been accomplished to the limit of funds made available.

However, those in charge of the program in Wisconsin are not unmindful of the responsibility such a program involves both in its administration at present and in the conditions it creates. A system of fire roads and fire lanes, if they are to be of positive benefit, must be maintained in years to come. This will necessitate additional funds. Also, if this system is to be beneficial and not harmful, it must be realized that the fire lanes and fire roads so constructed are for the use of fire fighting men and equipment only. If the public were allowed to use these roads, the fire hazard would be increased rather than diminished.

There is another aspect which must be considered. Most of these fire roads and fire lanes have been built in areas hitherto inaccessible by automobile. Most of them are in excellent game territory. The

very existence of such a system of fire roads and fire lanes may prove a serious temptation to game law violation.

If additional unemployment relief projects are necessary, the conservation department holds itself in a position to carry on with the same kind of work done in 1982. If so directed by the legislature, the department now has plans for projects which would give unemployment relief to the extent of approximately \$600,000. These projects could be carried out without adding to the permanent personnel or equipment of the department.

Moreover, if the legislature deems additional unemployment relief necessary, the department has at hand necessary information to undertake projects to the extent of one million dollars a year for the next two years. All projects in these plans would be grouped generally under the heading of pre-suppression work. If the unemployment relief movement is to be still further expanded, the department is in a position to use another one and one-half million dollars for specific forest improvement work on state owned forest lands and other publicly owned forest lands in which the state has a financial interest.

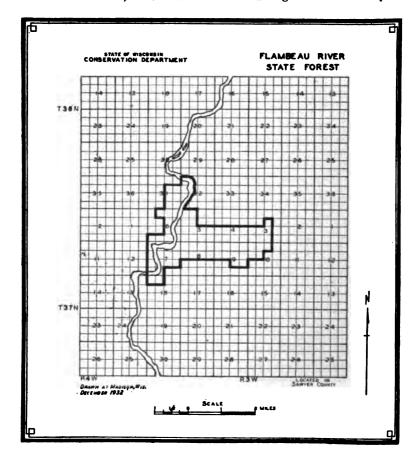
Part II—Section 4

FORESTRY—STATE FORESTS AND REFORESTATION

State Forests

Although the principal activities of the state forest program during the biennium have been toward the blocking and improvement of forest lands already owned by the state, there have been two notable advances made in land acquisitions.

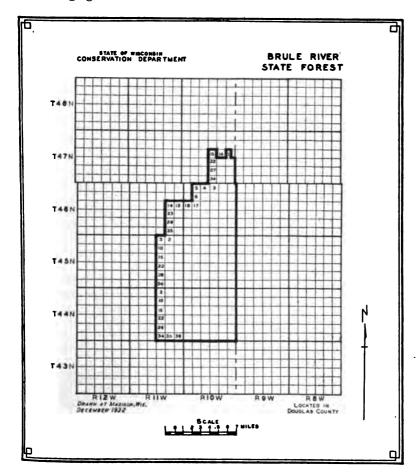
The first of these was the purchase of 833 acres in the Flambeau River State Forest, most of which contained virgin timber. This pur-



chase was arranged with the lumber company owners so that the state could acquire at minimum expense the maximum amount of river frontage. The Flambeau River State Forest will probably be more of a recreational area than most state forests because of its natural advantages. For this reason river frontage is particularly valuable.

The land acquired along the river made accessible to the public larger areas of state owned land under the jurisdiction of the Commissioners of Public Lands back from the river. It is around the nucleus purchased by the conservation department during the biennium that the Flambeau River State Forest will be developed. This was the first purchase of lands for forestry purposes since the days of the old State Board of Forestry which existed prior to 1915.

The other notable advance was in the crystallization of the policy of exchanging scattered state forest lands outside of the boundaries



of state forests for privately owned lands within such boundaries. By such exchanges the state acquired 1,700 acres of land within state forest boundaries in 1932. These exchanges resulted in reducing interior boundaries by a total of 12 miles, thereby reducing future survey and administration costs. Both these exchanges resulted in the acquisition of lands in Northern State Forest. At the close of the biennium negotiations were under way for four other such exchanges.

Except for planting, the improvement of roads has been the principal activity in state forest work during the biennium. In Northern State Forest, particularly, the primary road system containing 66 miles received major attention. In addition to surfacing with gravel each year, the roads in the primary system were given a coating of oil.

It is intended that eventually these roads will be given a turnover bituminous surface well adapted to the traffic demand. The secondary road system of Northern State Forest consisting of 47 miles, was also improved. The roads in American Legion State Forest were oiled during each season and there was some new construction done on both these areas.

In the Brule area, improvements were made in co-operation with the State Highway Commission, and with the county highway departments concerned. Such improvements were paid for from gas tax funds.

A number of new camp grounds have been made in state forests, and existing ones have been improved by the construction of suitable comfort stations, the sinking of new wells, the furnishing of tables, fireplaces, and refuse burners. Policing has been continued on all such camp grounds.

Under a co-operative agreement with the State Board of Control there were three state forest camps established in which prison labor was to be used for forest improvement work. These were located at Athelstane in Marinette county, Gordon in Douglas county, and Lake Tomahawk in Oneida county. In each of these camps the conservation department furnished a forester to lay out and supervise the forestry projects. Conservation department equipment was also furnished.

The activities in each of these camps consisted principally of planting, fire lane construction, fire road construction, slash and brush burning, surveying, refuge posting, and ribes eradication.

Reforestation

By far the most noteworthy progress in state forest work during the biennium has been the enlarged program of forest planting initiated in 1931, and carried out in 1932. Late in 1931 a special subcommittee of the Governor's Committee on Land Use and Forestry was appointed to make a study of the needs for reforestation. The report of this committee was presented in the early part of 1932. The conservation commission approved the recommendations of the committee that the state should commence at once a forest planting program of from 8,000 to 10,000 acres per year and to carry the program forward for at least five years. The work of land examination and the assembling of necessary equipment was undertaken immediately and field planting crews started work as soon as the frost was out of the ground in the spring.

The tremendous expansion of the planting activities made imperative the purchase of planting stock from private nurseries, principally from those located in Wisconsin. State forest planting activities in the past had been on a scale so much smaller than that begun in 1932, that the state nursery could not supply nearly enough stock. In



Furrow planting on Northern State Forest.

addition to the stock supplied by the Trout lake nursery, and that purchased from private sources, a considerable amount was secured from the federal government.

The policy adopted by the conservation commission, based on the recommendations of the special subcommittee, explained in Part I, Section 4, was adhered to strictly by the department in carrying out the planting program in 1932. Surveys were made during the year to determine the locations best adapted for expansion of the planting program in future years, bearing in mind the necessity for establishing planting areas readily accessible to the locations of the principal woodworking and wood using industries.

Much of the land now owned by the state which can be furrowed has been planted, and it is becoming increasingly more difficult to find suitable planting locations within existing state forests. When

the furrow method of planting was impracticable, the spot planting method was followed.

In all, during 1932, there were planted 10,064 acres of which 5,607 acres were planted in the spring, and 4,457 acres were planted in the fall. Of the 10,064 acres planted which required 9,722,197 trees, 60 per cent were planted to Norway pine, 10½ per cent to white pine; one and one-half per cent to Scotch pine; 12 per cent to jack pine; 13 per cent to Norway spruce; and three per cent to white spruce.

The species planted in 1932 were regulated to a considerable extent by the stock available. In the future it is planned to plant a greater percentage to spruce in line with the policy to encourage the planting of species in demand by pulp and paper industries.



First year seed beds at Trout Lake State Nursery.

The detail records including planting locations, species planted, and men employed will be found in Part III of this report.

Co-operative reforestation enterprises

Planting on state forests is the principal factor in the state's reforestation program. However, to encourage extensive reforestation, the commission continued a policy under which planting stock was furnished at reasonable price to private landowners for reforestation work in the state. The department co-operated with the extension division of the College of Agriculture of the University of Wisconsin in promulgating this program. During the first year of the biennium there were 886,650 trees furnished to landowners in 61 counties. Dur-

ing the second year this number was decreased when 311,275 trees were furnished to landowners in 45 counties.

A new policy of co-operation was entered into during the biennium. Several of the northern counties are establishing county forests. During 1932, extensive planting was carried on in county forests in two counties, Bayfield and Oneida. The conservation department supplied more than a million trees for planting in these two counties.

State forest nursery

The greatly enlarged reforestation program necessitated a five-fold increase in nursery operations. The Trout lake nursery was expanded to the utmost and the entire seeding for the spring of 1932 was done here. Necessary equipment was built and the seeding at Trout lake was completed before June 1. From this seeding it is anticipated that in the fall of 1938 there will be from 10,000,000 to 12,000,000 pine and spruce seedlings from the Trout lake nursery. These will be used for the planting period of the fall of 1933 and spring of 1934.

The enlarged reforestation program made more imperative than ever before the need of a new nursery in the central part of the state. Coupled with the enlarged need for planting stock for state lands is the old need of supplying trees approximately two weeks earlier for planting in the southern and central parts of the state than is possible from the Trout lake nursery.

A survey to determine suitable sites was carried out resulting in the selection of an area approximately three miles south of Wisconsin Rapids in Wood county for the new state forest nursery. An area of 20 acres, well located with respect to transportation, light, power, water, and labor, was donated to the state for nursery purposes by the Nekoosa-Edwards Paper Company. This new site was developed during the fall of 1932, and the production of forest planting stock will henceforth be divided between this new nursery near Wisconsin Rapids and the old nursery at Trout lake. These two nurseries will produce all the necessary planting stock for direct planting on state forest lands, for co-operative forestry with landowners, and for extension educational planting.

Detailed records of nursery production, output, distribution, and inventory are contained in Part III of this report.

Part II—Section 5

FOREST CROP LAW AND COUNTY FORESTS

Forest Crop Law

Entry of lands

Because the forest crop law provides what may be regarded as a probation period of five years, the conservation commission was at first liberal in approving lands for entry. Stringent restrictions at that time might have made the law ineffective. During the past year applications have been carefully appraised and where hearings left the matter in doubt, the lands were examined before final action by the commission. This has resulted in an increase in rejection of applications.

With respect to county entries, the blocking of the lands has become a major consideration. There is greater probability that scattering lands will be withdrawn by the county at the first opportunity for sale. Well blocked areas of county lands are being set aside as county forests. They reflect a growing tendency of the cutover counties to zone county owned lands in order to reduce the excessive costs for roads and schools resulting from scattered settlement. Consequently, there is reasonable certainty that well blocked areas of county land will not be broken up by withdrawals and sales.

Periodic Examination of Forest Crop Lands

Until 1931, land examination was limited to special cases. In 1932 a systematic examination of all entries was undertaken and more than half of the 1928 entries were examined by the foresters assigned to that work. Examination of 1928 entries will be completed by the spring of 1933, and a considerable acreage will be listed for hearing to determine whether the land shall continue under the law. As soon as the 1928 entries are completed the examination of the 1929 lands will begin. An earlier examination will provide time within the five year period for owners to improve their holdings by planting or other forestry work, and thus qualify to continue under the law.

The contract between the state and the owner of forest crop lands runs with the land. Thus forest crop lands may be conveyed to another ownership without affecting its entry. Whenever sales are made, the grantor is requested to fill out a request of transfer blank, listing the descriptions of land and the new owners. After the new owner has acknowledged the acquisition of such land and his intent to continue the practice of forestry thereon, an order of transfer is entered and copies are sent to the agencies receiving entry orders.

This assures correct ownership records. In addition to file records, this department has compiled a ledger listing description entered, transferred or withdrawn, and the acreage balance under each ownership. The net registered acreage by counties and for the entire state is also shown.

Classification of Lands Entered

It is interesting to note that during the biennium there was an increase in the amount of county owned land entered under the forest crop law as compared to the privately owned. In 1931 there were 95,695.28 acres of county owned lands entered, and 42,805.43 private. In 1932, 328,110.74 acres of county owned lands were entered and 33,820.14 acres private. Subtracting withdrawals at the close of 1932, there were 458,415.38 acres of county owned, and 291,877.18 acres privately owned land, or a total of 750,292.56 acres entered under the provisions of the forest crop law. The number of acres of county owned land entered includes those lands listed within defined county forest areas.

The lands entered under the law are located in 35 counties. Complete detailed tables of land entry may be seen in Part III of this report.

County Forests

Establishment of County Forests

To aid counties in establishing county forests, the procedure was discussed with county officers and county boards. To clarify procedure in the adoption of the enabling resolution, a standard form resolution was prepared and copies supplied to interested counties. All of the instructions to the county clerk were included in this resolution. The adoption of a standard procedure which meets legal requirements, has been of considerable aid to the counties. This resolution was prepared with the co-operation of the Attorney General.

In counties where the project was undertaken the extension forester worked with county board committees and the county agricultural agent in selecting and delineating tracts suitable for state forests. Areas not suitable for agriculture and where county owned lands were well blocked were selected for county forests.

Administration of County Forests

In the absence of any county organization to supervise the county forests, the responsibility has been delegated to a committee of the county board. This may be a conservation committee specifically or the responsibility may be one activity of the agricultural committee. In some cases a newly created land or zoning committee has been designated for this work. There is a growing sentiment in favor of county zoning. Suitable county zoning ordinances or legislation would be of material assistance in helping select areas for establishment of county forests.

Because county agricultural agents had been helpful in selecting county forest areas and preparing applications for entry of lands under the forest crop law, the conservation commission adopted a resolution favoring their participation in the management of county forests. This proposal has been adopted by the county board committees, and the county agent is administering the forestry aid work under the supervision of the conservation department.

Suitable projects have been laid out by foresters from the conservation department, and local matters such as wages and distribution of employment have been handled by the county groups. Planting plans for the light soils areas in Oneida and Bayfield counties have been carried out and one million seedlings have been planted by these two counties this fall. Other projects will be outlined for Rusk and Langlade counties

Department foresters have also helped on fuel cutting projects on county forest crop lands where the establishment of county forests has not been completed. While these constitute relief projects, they result in improvement cuttings, by removing cull hardwood trees which are overtopping valuable young growth.

Part II—Section 6

STATE PARKS

Introductory

For many years the State of Wisconsin has provided facilities for outdoor recreation for her citizens and visitors. It is important to reserve for public use the outstanding scenic or historic places, reasonably accessible, so that all natural or other features may be enjoyed under conditions that are safe and sanitary. This fact sets up a direct need for roads, trails, comfort stations, communication facilities, policing, safe water supplies, shelter, camp and picnic ground equipment, fire protection, and many other requirements which are the daily concern of the department and which absorb the bulk of the energy of the personnel and funds made available. State parks can contribute to the recreational and business needs of the state most effectively when these use requirements are adequately met. It has been the constant aim of the department to improve all facilities on the state parks in a manner consistent with the preservation of all natural or other valuable features.

Open new areas

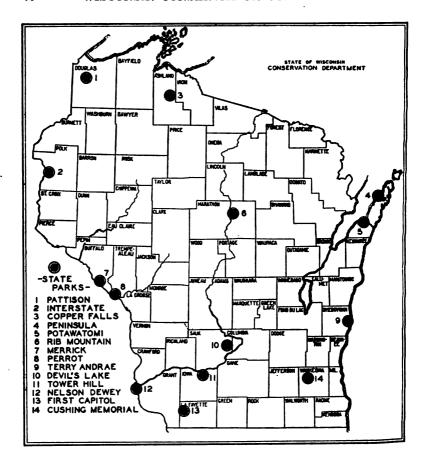
Two new areas were made available to the public as state parks during the biennium. While both the land in Rib Mountain State Park in Marathon county, and Merrick State Park in Buffalo county have been owned by the state for a number of years, there were no roads to either area and consequently the parks were used very little.

An excellent new road has been built to the summit of Rib Mountain, the highest known point in the state, and the park was officially opened to the public. This road was built with the co-operation of the Marathon County Highway Commission, with the forest and park road appropriation from gas tax funds.

The area now known as Merrick State Park is located just north of Fountain City in Buffalo county, on a bay of the Mississippi river. This latter area had been in considerable use for a number of years as a park, through the co-operation of Fountain City officials, who furnished equipment for park use. In 1932, the conservation department took over the improvement work and the area was renamed and definitely established as Merrick State Park.

The area was named in honor of the late George B. Merrick. Mr. Merrick was a pilot in the old steamboat days on the Mississippi river and was an historian and author of note. He was considered one of the outstanding authorities of Upper Mississippi river history.

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Attendance

As the state parks are more generally known, attendance increases. This was true up to and including the year 1931. During 1932, however, attendance in Pattison, Nelson Dewey, Tower Hill, and Copper Falls State Parks decreased. Attendance at Devil's Lake, Peninsula, and Interstate Parks increased. This was particularly true of Peninsula State Park, where the number of campers increased notably during 1932.

Designation of parks and forests

During the biennium a distinction was established between the designation of lands hitherto classed as state parks. State parks are now understood to be those areas which have outstanding scenic or historic characteristics and in which recreation is paramount and forestry subsidiary.

In state forests the production of forests is considered first. Ulti-

mately, the latter may produce lumber, but forest areas in state parks will never be logged. Several of the areas hitherto called state parks were definitely named state forests. Prior to the present biennium, due to the dual responsibility concerning certain lands, areas which were in fact state forests were officially called state parks. There were three such areas, Northern Forest State Park, American Legion State Park and Forest Preserve, and Brule State Park. Each of these areas was relatively large in acreage and while each possessed very important recreational possibilities, each is essentially a state forest area rather than a state park area. A clear cut differentiation was made possible during the last two years and the list of state parks and state forests appearing in Part III of this report lists them under their proper designations.

Roads and improvements

While the funds available for general park maintenance and improvement have been very limited during the biennium, the road fund has been maintained. This has given an opportunity for continued improvement of the roads leading to or within state parks and state forests. Particular attention has been given to the roads in Peninsula State Park, where the new Norway ridge road was constructed and all of the primary park road system was surfaced with crushed stone and oiled.

At Devil's Lake State Park the road from state trunk highway 113 to the northeast corner of the park was graded and surfaced with gravel. The road to the top of Rib mountain was graded and surfaced with gravel. The road leading to Copper Falls State Park from the city of Mellen was widened. The new road in Potawatomi State Park was completed and partially surfaced with crushed stone. Nelson Dewey State Park road was improved and resurfaced, and minor road improvements were made at Tower Hill, Perrot, Merrick, Interstate, and Terry Andrae State Parks.

A dust settler, either of oil or calcium chloride, was applied to all roads in the primary systems of all parks and to the principal approaches to the parks.

Equipment and facilities

Continued attention has been given to the improvement of sanitary facilities and drinking water supplies on all the parks. At Nelson Dewey State Park the main well was deepened from 184 to 531 feet, and a power pumping unit installed with running water now provided. Several new wells were drilled at Devil's Lake State Park. Sets of new and improved comfort stations were erected at Nelson Dewey, Interstate, Merrick, Rib Mountain, Copper Falls, and Tower Hill State Parks. Additional park equipment was provided for the Terry Andrae, Devil's Lake, Rib Mountain, Merrick, and Pattison areas. In general, the state parks are now reasonably well supplied with the necessary park equipment and facilities.

Part II—Section 7

FISHERIES

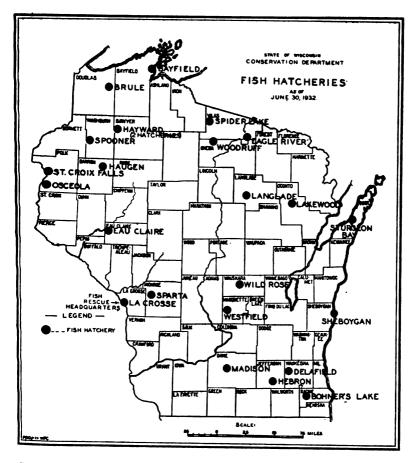
Production

Generally favorable conditions during the biennium enabled the conservation department to increase the total annual output of fish despite reduced funds. In 1931, of all species, there were 377,746,495 fish produced and distributed. In 1932, the total rose to 425,194,348. The larger total is accounted for principally by the ircreased production of wall-eyed pike. Complete detailed records of production by hatcheries and species and distribution by counties may be seen in Part III of this report.

Reduced funds necessitated the closing of some hatcheries. 1931 there were 21 hatcheries in operation and 18 were operated in 1982. The increased production despite the reduced number of hatcheries is due to successful grouping of activities, increased efficiency of the plants operated, and generally favorable conditions, particularly weather. The hatchery methods which have been proved by many years' experience were followed during the biennium. Further experiments in the use of fish foods reveal improvements, principally in the food for trout. It was found that adding dehydrated sweet milk to the diet of brown trout fry and small fingerling improved and hastened their growth. The milk, which comes in large sacks, is prepared for the fish by mixing it into thick paste, lumps of which were placed in the feeding troughs. Some of it was kept in the feeding trough at all times. This use of dried milk proved to be the determining factor in making possible the rearing of brown trout at the Madison hatchery. Hitherto, brown trout hatched there had been shipped to other hatcheries for rearing, but because of this new food, excellent results were obtained at the Madison hatchery in 1932.

The propagation and rearing of trout was increased during the biennium. This same expansion followed through all species of fish. The department made the best record in muskellunge propagation in 1932 that has been made in the 35 years of experimentation with this species. In 1932 there were 1,100,000 muskellunge hatched and planted.

Propagation of a new species was begun during the biennium. Prior to 1932, there had been no state propagation of perch. Beginning on a small scale in 1932, perch are being hatched and reared in hatcheries in the southern part of the state for distribution to certain lakes also in the southern part of the state. The numbers of perch for planting in the southern waters were augmented by shipments of fingerling and adult perch from certain northern Wisconsin lakes which are overstocked with this species.



Co-operative hatcheries

The demand for lake fish for planting has multiplied many times in recent years, taxing the production capacity of all state hatcheries. At the present time it is impossible for the conservation department to establish new hatcheries. Consequently an attempt has been made to answer this increased demand by a co-operative policy which enables towns and counties to establish pike hatcheries. Under this arrangement all expense in connection with the building of the hatcheries, the collection of eggs, and the hatching and planting of fish is borne by the town or county. For its part, the conservation department furnishes experienced men to supervise the hatchery operations during the few weeks of each year the hatcheries are in operation. These men have full charge of all pike egg collections and hatchery operations. The department also furnishes nets and some other equipment to be used in the collection of eggs until the towns or counties owning the hatchery can purchase their own equipment.

Under this co-operative agreement it is distinctly understood that at no time in the future will the conservation department be called upon to assume all the expense of operation of the hatchery or any other obligations relative to their operation and maintenance.

Distribution

Fish were distributed during the biennium under the same policy and following the same methods employed in previous years. Of interest, however, is the increased distribution to individuals or organizations who call at the hatcheries to receive their fish.

The state's distribution facilities include two large specially constructed trucks and one specially constructed railroad car, the Badger No. 2. These trucks and the railroad car are equipped with icing and aeration facilities so that fish can be kept in the best condition throughout transit.

The Chicago & North Western Railroad loaned to the conservation department the use of two baggage cars during the fish distribution season of each year. With these added facilities it was possible to formulate a distribution system by which fish could be moved from any hatchery or rescue headquarters in the state to any receiving station and not have fish in transit more than 24 hours.

The program of distributing adult trout to certain of the principal trout waters in the state was continued during the biennium. The extent of such a program depends in large measure upon funds available to purchase food during the increased period necessary for rearing. In the first year of the biennium there were 98,331 adult brook trout distributed to waters in 25 counties. In 1932 there were 69,125 adult brook trout distributed to trout waters in 24 counties and 600 adult brown trout distributed to waters in two counties. A smaller



Hebron State Fish Hatchery.

number of adult rainbow trout was also distributed during each of these years. The adult trout mentioned in this connection means the yearling and 20 month old fish reared at the hatcheries. In addition, there was a considerable distribution of older trout, principally superflous breeding stock from certain of the hatcheries.

Co-operative rearing program

The co-operative rearing program carried on by the conservation department and sportsmen's organizations has been continued with success. During each of the two years the conservation department furnished brook and brown trout fry to 52 organizations for rearing to a large fingerling size before planting. Many of these organizations maintained several rearing ponds. The number of fish distributed to each was determined entirely by the capacity of the pond.

In 1931, there were 318,100 brook and 308,000 brown trout distributed to co-operating organizations. In 1932, 391,000 brook and 363,000 brown trout were so distributed.

Continued study in rearing pond methods resulted in the recommendation of a metal rearing trough to replace the natural rearing ponds. There are four reasons which point to the rearing trough as being more satisfactory than the rearing pond for general use by sportsmen's organizations: (1) the attendant, who obviously is not an expert on feeding, can better see at all times how the fish are feeding; (2) troughs can be kept cleaner than a pond; (3) the fish can be better protected from predacious birds and animals; and (4) all the fish can be taken out of the troughs, whereas frequently it is difficult to get all the fish from a pond.

Experience of several years shows that fish will grow as large in the troughs as they will in ponds if they receive the same amount of food. Ideal troughs, and the size recommended by the department, are 14 feet long, 14 inches deep, and 18 inches wide. They will hold 12 or 13 inches of water. The narrowness and depth of this trough facilitates cleaning and the fish seem to do better in a deep trough than in a shallow one. At the state hatcheries as old equipment is used up, new equipment will be added.

Commercial fishing conditions

The excellent results obtained in the propagation of game fish did not carry over to commercial fish during all of the biennium. During the year 1931, prolonged heat and drought continued late into the fall, postponing the cooling of the water in the Great Lakes and Green Bay. This postponed the spawning time for lake trout. Considerable difficulty was encountered in the collection of spawn and the waters in the hatcheries continued so warm that the hatch of commercial fish, particularly lake trout, was not as high as in some previous years. In 1932, however, conditions were better and correspondingly better results were obtained.

There are two conditions, one artificial and one natural, which are assuming the proportions of menaces to the commercial fishing indus-

try in Lake Michigan. The first of these is the new kind of net introduced and used by certain fishermen in recent years. It is called the submarine net and is held in place by anchors and buoys and has the pot and hood covered. It can be placed in any depth of water, which enables fishermen to follow the migration of fish. This net is particularly destructive to whitefish. The 1931 legislature ordered the conservation commission to make an investigation regarding the use of this net, and its effect upon fish population. This investigation was made and resulted in a recommendation by the conservation commission to the legislature recommending the prohibition of the use of such nets. A detail of the recommendations may be found in Part II, Section 1 of this report.

The natural menace to commercial fishing in Lake Michigan is the tremendous increase in the numbers of an exotic fish introduced into the lake several years ago. The fresh water smelt, first introduced into Lake Michigan waters from inland lakes from the State of Maine, have so increased in recent years that they greatly hamper the placing of nets at certain times of the year. While the smelt itself is a good food fish, such large numbers of immature and consequently unsalable fish, invade the fishing grounds at certain times of the year that they tangle nets. This condition became so severe during the spring of 1932 that nets of Marinette fishermen became so fouled with smelt that it was necessary to take the nets ashore to remove the smelt before the nets could be used to catch the chubs and trout for which they were set. The smelt were so numerous at times that they necessitated cessation of all fishing. At first the nets were cleaned in the usual way by picking the smelt out by hand, but in certain instances nets were so badly tangled that the fish had to be boiled out of them.

It has been claimed by certain fisheries authorities that fresh water smelt in Lake Michigan will become as great a nuisance in years to come as German carp have in inland waters.

Stocking of Chippewa lake

The public utilities company which built the dam on the Chippewa river creating the 16,000 acre flowage in Sawyer county, received its authority with the provision that it would plant as many fish in this new water area as the conservation department deemed to be sufficient to properly stock it. Such an agreement was fair because in flowages natural reproduction is practically negligible due to the fluctuating water level. After considerable study, the department recommended that at least 240,000 bass and 96,000,000 pike should be planted. The power company could not secure such a quantity of fish for planting and it was agreed that the power company should pay to the conservation department a sum of money sufficient to produce and plant the fish required. The work of producing and planting the fish was begun in the spring of 1932, when 51,600,000 pike and 12,000 bass fingerling were produced and planted in the

flowage. This work is carried on with the co-operation of the Hayward Rod and Gun Club and Sawyer county officials.

Whitefish destruction in Lake Mendota

The inland water whitefish or cisco is native to Lake Mendota, Dane county. In addition to the native stock, Great Lakes whitefish have been planted in the lake, the first planting of 75,000 fish being made in the year 1880. Conditions are excellent for the fish and they are extremely plentiful at the present time.

At several other times there have been plagues of varying intensity, but the one which occurred during the summer of 1932 was by far the most severe. So many of the fish died that the surface of the lake seemed to be covered with them, and sanitary agencies had great difficulty in removing the fish from the shores. Bathing had to be prohibited on the beaches for several days.

There was nothing to indicate the specific cause of death. It was observed that the fish would come to the surface with enough force to throw them full length out of the water, and after falling back into the water they would make a slight struggle before dying. University biologists studied the problem, but their studies did not disclose evidence enough to give a satisfactory explanation. Small worms were found in intestinal tracts of the dead fish and other slight unusual indications showed that the fish were not in perfect health. However, because the whitefish lives in such deep water during the summer that it was impossible to secure enough healthy fish to make a comparative study, this had to be postponed until late the following fall when the fish came into shallow water to spawn.

One interesting phenomenon of this condition was that all of the fish that died were practically the same size. It was unusual for an individual fish to vary in weight more than an ounce or two from the average.

Fish refuges

More attention has been paid during the biennium to the improvement of natural conditions for fish than ever before in the history of fisheries work in Wisconsin. Principal efforts were along two directions, creating refuges to protect fish in known spawning and rearing grounds, and installation of the first successful fishway to enable fish to proceed upstream through dams.

There are three types of fish refuges. The first of these are established for trout and are permanent. Trout spawn and artificially reared trout are planted in these small feeder streams. Except at spawning time, large fish do not inhabit the small streams and if fishing is permitted in them, the fisherman's catch is largely illegal. These refuges are established to protect the trout until they are large enough to swim out into the main stream. At the end of the biennium there were 226 such refuges in effect.

The second type of refuge is established in lakes on known spawn-

ing grounds, and continues only during the spawning season. This type is particularly for bass. During 1931 there were 50 refuges of this type established, and during 1932 there were 52. Five of the refuges created for bass or other lake fish are permanent until rescinded by commission action.

The third type of refuges, of which there is at present only one in the state, are established under dams or other obstructions where fish congregate because they are unable to continue their trip upstream. Considerable unfortunate experience at such places has indicated the necessity of providing greater protection to such areas than is provided by the regular fishing laws. The refuge of this sort is the one established in the Chippewa river below the dam at Winter. However, practical refuge conditions are obtained through general legislation which prohibits fishing for varying distances below all dams.

Fishways

The obstruction of water courses by dams is one of the two or three greatest reasons for the lack of efficient natural propagation of fish. Nature tells fish to go upstream to spawn. Even at the best, a very small percentage of the tremendous number of eggs laid, hatch and develop into fish. When fish are obstructed in their normal spawning activities there is practically no reproduction.

Until 1931, there had never been a successful fishway which would permit access of lake species of fish, muskellunge, pike, pickerel, bass, and others of these types, to get over or through dams in their annual journey upstream. The Wisconsin Conservation Department has been experimenting with many types of fishways for many years, but the first success was had with the installation of a new type fishway at the Rest lake dam in the Manitowish river in the spring of 1931. This new fishway was a radical departure from other ideas. Rather than a fish ladder or fish wheel of usual types, it was really a fish lock or elevator. Detailed description of the fish lock or elevator may be had upon application to the Wisconsin Conservation Department.

Several factors were against the success of the fishway in its first operation. It could not be placed at the point in the dam where all fishways should be placed, i. e. at the point furthest upstream and immediately below the dam. The dam was located immediately below a principal state trunk highway and the large numbers of people who were attracted by the unusual experiment tended to keep the fish from entering the fishway. Construction delays postponed the completion of the fishway until after the normal migration season.

Despite all these factors, however, the fishway proved successful in its first year of operation. The conservation department upon the basis of this successful experiment, recommended the introduction of fishways in other dams in the state.

Another significant experiment was conducted at the Prairie du Sac dam on the Wisconsin river, in which there were even less favorable conditions. This experiment also proved successful. Detailed tabular information about the numbers of fish of each species which passed through the fishway may be found in Part III of this report.

Pollution

Pollution studies have continued. The conservation department is represented on and makes its facilities available to the State Committee on Water Pollution, which is developing co-operative plans for the control and disposal of commercial waste and sewage which pollutes Wisconsin waters.

Part II—Section 8

GAME

Introductory

The game program, starting late in the field of other Wisconsin conservation activities, has the advantage of the experience of other states and countries to consider in the formulation of as comprehensive a program as possible. Wisconsin has made a start in the past four years toward meeting some of the problems facing the successful game program. Particular progress has been made during the biennium. However, this represents merely a beginning. If Wisconsin is again to take her place among the major game states, the program must have the wholehearted support of the public at large and sportsmen in particular.

It is for this reason that public support and co-operative enterprises are undertaken to as great an extent as possible. In practically every field of activity the game division has co-operative projects with individuals and organizations.

An efficient and comprehensive game program must include more than merely protection of native species or production of substitute species. It must include efforts toward protection and restoration of desirable cover, control of predators, and provision of food in times of need.

Under the present program, the administration of the game division includes the game survey, game and census trapping reports, game refuges, wild life refuges, wild life sanctuaries, waterfowl refuges, public shooting grounds, game farms, restocking and transplanting programs, experimental projects, winter feeding, and regulation of shooting preserves, private game farms, private fur farms, private deer farms, fur bureau, and research bureau.

Game survey-Game and trapping census reports

The extent of the Wisconsin game harvest, together with an annual estimate of the game crop, is essential if the Wisconsin plan is to function. In order to obtain an estimate of the game crop, it is necessary to take inventory, so to speak, by a comprehensive game survey. A survey organization has been formed in Wisconsin, and is composed of 600 people including conservation wardens, forest rangers, game observers, and sportsmen's organizations, who report periodically to the department on game conditions, by counties.

The 1931 legislature passed the census report law, which requires that each sportsman report on an individual blank his kill for each hunting season. This gives the conservation department its first real opportunity to check on the annual game kill in this state. By check-

ing the annual kill against the estimated game crop, the department has a splendid nucleus on which to build its general game program.

Knowledge of the extent of the annual game harvest makes it possible to estimate the total game crop more accurately. In Wisconsin, for instance, at the end of the 1931 hunting season, 600 questionnaires were sent to the game survey members. Conclusions as to the percentage of species taken were reached, by estimation, actual counts over small areas, winter feeding station counts, and by banding. Through a general state average it was learned that although the total grouse kill for 1931 was approximately 100,000 birds, a general estimate was that less than 10 per cent of the total grouse crop was killed. It was, therefore, a conservative estimate that the total Wisconsin grouse crop in 1931 approximated 750,000 birds. The waterfowl kill, approximately 400,000 birds, was estimated to be but 20 per cent of the 1930 kill, indicating reasonably that a minimum of 1,500,000 ducks, geese, and coots were taken in Wisconsin in 1930. The rabbit crop, conservatively estimated at 8,000,000, including the 2,000,000 killed by actual count, includes those taken by landowners who have the right to take rabbits and squirrels all year without a license, the estimated number killed by automobiles, and those killed by predatory animals and birds. The estimated squirrel kill by census report tabulation was slightly over 1,000,000, estimated to be less than 30 per cent of the total crop.

It is recognized that these figures are not entirely accurate. However, even if they should be as much as 25 per cent in error, they still provide a satisfactory basis upon which to work. Knowledge of the grouse crop, for instance, in conjunction with the splendid rearing season of 1932, gave the conservation commission a solid foundation upon which to increase the length of hunting season and the bag limits.

In 1933, for the first time, there will be available specific information on the annual kill and crop of ring-necked pheasants, Hungarian partridge and bobwhite quail by counties. This will permit not only a thorough check on stocking and winter feeding operations, but a satisfactory basis upon which to establish the length and bag limits of the 1933 hunting seasons. There will also be available for the 1933 legislature for the first time, detailed information on the deer kill by counties. For the first time, information will be available to the legislature which will give an accurate picture of the population of such game species as rabbits, squirrels, raccoon, opossum, and other quadrupeds. The department will also be able to advise the federal biological survey of the approximate number of ducks killed in Wisconsin and the actual number of other species of migratory birds. Not least of the values of the game census will be the information to give the Wisconsin public concerning the value of the total annual game kill, both in terms of value as food and in costs of restocking.

A reproduction of the 1932 game census card, together with the

tabulation of species taken during the 1931 season, may be seen in Part III of this report.

Game survey—Trapping reports

The conservation department has received reports from licensed trappers for many years. These indicate specifically the number of animals of each species taken by the trapper. The reports also indicate the county in which the animals were taken and the price received by the trapper for the pelts.

The tabulation for the reports for 1931 reveal a smaller number of trappers, probably due to the lowest fur prices in a decade, and the fact that there was not an open season on muskrats in most counties. However, it is interesting to note that despite the low prices, the value of fur taken in Wisconsin by licensed trappers exceeded an estimated value of a half million dollars.

The tabulations showing the number of animals taken and the prices received during each of the past several years may be found in Part III of this report.

Game refuges

For game administration and refuge purposes, Wisconsin may be divided into four game districts, each of which has its own peculiar problems and characteristics. These four districts are the southeastern district comprising 26 counties; the southwestern district comprising 17 counties; the central district comprising six counties; and the northern district comprising 22 counties.

From the standpoint of game, a game refuge or wild life refuge is efficient only when it is stocked with species of game which will fill up the refuge area and overflow into adjacent public hunting lands.

Certain species of game are particularly adapted for a refuge-public shooting ground program. These may be listed as Class A game. Other species which make use of refuges, but which are not the best refuge game, may be termed Class B game.

The game species in Wisconsin best adapted for a general refuge program are deer, beaver, muskrat, prairie chicken, sharp-tailed grouse, ring-necked pheasants, and Hungarian partridge. Of these, the most important in the northern and central game districts are deer, beaver, muskrats, prairie chicken, and sharp-tailed grouse; in the southeastern and southwestern districts, muskrats, ring-necked pheasants, and Hungarian partridge. Rabbits, squirrels, and ruffed grouse are the most important Class B game in all districts.

Wild life refuges and sanctuaries

There are 59 wild life refuges comprising 62,291 acres in Wisconsin. For the most part these are efficiently managed small game refuges. There are 12 state wild life refuges comprising 235,137 acres. All state game refuges, with the exception of the Blackhawk refuge, are established primarily for big game. The 14 state parks,

comprising 11,562 acres, form a valuable addition to the refuge system. All state parks are wild life refuges.

During the biennium certain lands hitherto classed as state parks were reclassified as state forests. All lands within state forests are not refuges. In the largest of the state forest areas, Northern State Forest in Vilas county, a new refuge was established by commission action comprising approximately two-thirds of the former area there.

In the state parks and state forests there are approximately 140,000 acres of land classified as wild life refuges.

Wild life sanctuaries are established for the protection and propagation of certain species of animals, birds, trees, shrubs, plants, or flowers. A wild life sanctuary has the same regulations as a wild life refuge. Two sanctuaries were established in Wisconsin in 1932, both in Outagamie county.

A map and detailed information about the refuge system in Wisconsin may be found in Part III of this report.

Waterfowl refuges

There are three waterfowl refuges in Wisconsin. They are the Delta Fish and Fur Farm in Trempealeau county, established by statute, Moon Lake Waterfowl Refuge in Fond du Lac county, and Puckaway Lake Refuge in Green Lake county. The latter two were established by commission action. In all, these three refuges comprise approximately 5,000 acres.

The Puckaway Lake Refuge, established in September, 1931, includes about 500 acres of rice beds in the eastern end of Puckaway lake in Green Lake county. This is Wisconsin's first managed waterfowl refuge. Observations were taken in the fall of 1931, and again in the fall of 1932, for the purpose of checking the practicability of establishing additional waterfowl refuges in Wisconsin.

Waterfowl refuges are established primarily for marsh duck species, including mallard, black duck, green and blue winged teal, pintail, widgeon, gadwall, shoveler, wood duck, and coot. From observations made in 1931, it is believed that a series of small refuges, comprising approximately 20 per cent of each of the more important duck lakes, will offer the migratory birds an opportunity to feed and rest, and will provide greatly improved hunting. The waterfowl refuge system is advocated by enthusiastic duck hunters as a principal solution to better duck hunting in Wisconsin.

Waterfowl refuge inspection

Preliminary to a waterfowl refuge program, in the event that the Puckaway Lake refuge shows itself to be practicable, surveys have been made of 20 principal Wisconsin waterfowl areas in order to increase in 1933 the Wisconsin waterfowl refuge program. Surveys have included the following: Puckaway lake, Rush lake, Lake Butte des Morts, Lake Poygan, Buffalo lake, Horicon marsh, Delta Fish and Fur Refuge, Moon lake, Theresa lake, Fox lake, Hustisford mill pond,



Fox river, Wisconsin river, Lake Mendota, Lake Koshkonong, Rome mill pond, Hubbleton mill pond, Lake Mills, Sheboygan marsh, and Lake Geneva.

If waterfowl refuges are established on these areas, it is probable that funds will not permit the setting up of more than from two to four refuges each year. Only a small per cent of the marshy areas adjoining each lake will be set aside as a refuge. No refuge will comprise more than 20 per cent of the entire waterfowl area.

Public hunting grounds

There are no lands in Wisconsin specifically set aside as public hunting grounds. However, all lands entered under the forest crop law, approximately 750,000 acres, are both public hunting and fishing grounds. Public hunting and fishing is possible on all publicly owned lands not specifically set aside as refuges. This includes all lands in state forests not classed as refuges, and all other state or county owned lands.

The acquisition of public hunting grounds systematically located with reference to refuges is advisable in a modern game program. With this in mind, the game division selected and surveyed several areas adapted to public hunting ground purposes with the hope that a beginning may be made soon toward the establishment of a scientifically managed combination of public hunting grounds and refuges.

State game farms

The Peninsula state game farm, located in Peninsula State Park in Door county, consists of approximately 95 acres which are in actual use for game farm purposes. Facilities include one game farm manager's residence, one residence used as quarters for game farm employes, one combination hatching equipment and feed house, one storage feed house, one experimental hatching and brooding house, and four smaller brooder houses and runs. There are four large pheasant rearing fields, one of approximately 18 acres, one of 26 acres, one of 14 acres, and one of 11 acres, a wild turkey field, comprising about six acres, an emergency rearing field of four acres, and an experimental field of six acres, together with a winter pen of approximately eight acres. An additional four acres of land is covered by 200 portable breeding pens. A covered winter pen, of approximately two acres, is located near the game farm residence. There are also 16 large covered pens which are used for game bird and animal exhibition. There is, in addition, a two acre field used for the display of white-tailed deer and wild turkeys.

In 1931, 28,973 ring-necked pheasant eggs were distributed from the state game farm. Reports show that from these eggs 10,810 ringnecked pheasants were reared to the age of eight weeks and released.

Approximately 10,500 ring-necked pheasants were reared at the state game farm in 1931. Exactly 7,807 birds were distributed for stocking, 887 birds were distributed for co-operative breeding, and

1,862 birds were held for breeding at the farm or were shipped during the spring of 1932 to co-operators for breeding purposes. It is interesting to note that from the 837 birds distributed in 1931 to sportsmen's organizations as breeders, that 5,669 eggs were produced, from which 1,477 birds were reared and liberated.

About 150 wild turkeys were also reared at the Fish Creek farm in 1931.

The state game farm, in addition to being a hatching and propagating plant, is a clearing house for all confiscated game. About 47 white-tailed deer, nine black bear, and 66 other animals and birds of various species were distributed from the game farm during 1931.

Improvements for 1931 include remodeling of the game farm zoo, remodeling of the game farm house and barn, the addition of 4,500 feet of fencing, not including a two acre deer field, the purchase of 100 portable steel breeding pens, the remodeling of winter pens and holding pens, the building of four feather brooder houses and runs, the building of a 54 foot modern hatching and brooding house, and the construction of 75 small breeding pens and special brooding coops.

During 1932, 29,522 ring-necked pheasant eggs were distributed from the state game farm. Records on hatching and distribution are not compiled to date, but it is estimated that between 11,000 and 12,000 pheasants were liberated from these eggs.

Approximately 10,500 ring-necked pheasants were reared at the



Hand reared prairie chickens, 80 days old, at state game farm.

game farm in 1932. About 7,800 birds were liberated for stocking, 2,021 birds were distributed for breeding. Breeding records on approximately 1,000 ring-necked pheasants have not been tabulated to date, but it is estimated that co-operators received from these pheasants in excess of 20,000 eggs, and that from these eggs between 7,000 and 8,000 pheasants were reared and distributed for stocking purposes.

Approximately 250 wild turkeys were reared at the game farm in 1932, together with 345 Reeves, Versicolor, Mongolian, and Mutant pheasants, and 60 Chukar, Hungarian, and Valley partridge. About 300 bantams were reared, in addition, for brooding purposes.

Experimental projects for 1932 included the artificial hatching of 1,000 ring-necked pheasant eggs, the rearing of approximately 800 pheasants by feather brooders, and the experimental hatching and brooding of ruffed grouse and pinnated grouse. Eight pinnated grouse were hand reared during 1932. These are believed to be the only hand reared prairie chickens in the United States.

Exactly 30 white-tailed deer and seven black bear, together with 40 other game animals and birds, were distributed from the state game farm clearing house in 1932.

Improvements at the state game farm during 1932 included the building of 2,500 feet of rearing field fence, and the building of 75 small breeding pens.

A subsidiary of the state game farm, the Waupun game farm, is operated only during the hatching and rearing season. Ring-necked pheasant eggs are shipped to Waupun from the state game farm at Fish Creek, where they are hatched and reared by prison labor under the supervision of an experienced game breeder.

Approximately 1,900 eggs were shipped to Waupun in 1931, from which 880 nine to 10 weeks' old ring-necked pheasants were distributed in 18 adjacent counties. Approximately 2,450 eggs were shipped to Waupun in 1932, from which 1,284 pheasants were shipped to 26 adjacent counties.

Waupun game farm plans for 1933 call for the distribution of from 3,000 to 4,000 half grown birds.

The Moon lake experimental game farm, comprising about 900 acres in Fond du Lac county, was leased from the Milwaukee chapter of the Izaak Walton League in 1931. The purpose of the farm is to conduct experimental projects in the breeding, hatching, rearing, and stocking of exotic and native game species, and to offer information to game breeders and the general public on methods and costs of artificial and natural game production.

Moon lake is the official waterfowl banding station in Wisconsin, and several hundred ducks are reared, banded, and liberated each year with Biological Survey bands. Principal species of ducks banded include mallards, black ducks, wood ducks, green and blue winged teal, widgeon, pintail, shoveler, and coot.

Since leasing Moon lake in 1931, approximately \$2,000 has been spent in establishing new equipment in the form of a hatching and



Canada geese at Moon Lake State Game Farm.

brooder room, incubators and artificial brooding equipment, holding pens, breeding pens, rearing runs, and fencing.

Experimental brooding, hatching, and rearing has been conducted principally with Hungarian, Chukar, and Valley partridge, bobwhite quail, Reeves, Versicolor, Mongolian, and Melanistic Mutant pheasants, and mallard ducks.

In 1931, 2,008 ring-necked eggs were distributed from the Moon lake farm, together with 1,408 ring-neck pheasants which were stocked in 14 counties. Approximately 450 partridge, quail, and the rarer pheasants were reared to maturity from which breeding stock was selected for 1932.

There were 275 mallard ducks banded and liberated at Moon lake in 1931.

In 1932, 7,423 ring-necked pheasant eggs were distributed to 36 Wisconsin counties, in addition to 445 Melanistic Mutant eggs which were distributed to additional counties. About 850 Melanistic Mutant pheasants, 700 Mongolian pheasants, and approximately 75 Reeves, Versicolor, and Formosan pheasants were reared at the Moon Lake farm this year. In addition, 156 Hungarian partridge, 148 bobwhite quail, 86 Valley partridge, and 10 Chukar partridge were reared to maturity. About 425 mallard ducks and 36 wood ducks were reared in the waterfowl projects. The 225 ring-necked pheasants hatched and

reared artificially at Moon lake in 1932 were distributed to adjacent counties.

Approximately 400 Melanistic Mutant pheasants, 350 Mongolian, 30 Versicolor, and 20 Reeves pheasants will be held over at Moon lake for breeding purposes in 1933. In addition, 150 Hungarian partridge, 10 Chukar partridge, and 75 mallard ducks will be held as breeders.

Ring-necked pheasant stocking program

The ring-necked stocking program for Wisconsin is being enlarged each year. In 1930, through pheasants stocked from the state game farms, pheasants reared from eggs shipped from the state game farms, pheasants reared and liberated from breeders shipped from the state game farms, it is estimated that a total of 18,000 pheasants were liberated.

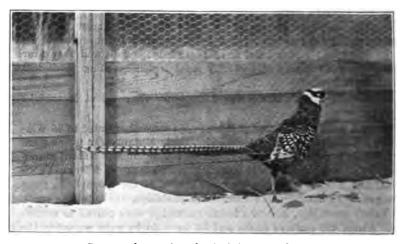
Under the same plan, 25,000 pheasants were distributed in 1931, and it is estimated that the 1932 distribution will be between 30,000 and 32.000 birds.

The game division is concentrating its stocking program in 24 counties, although it is stocking ring-necked pheasants in all of Wisconsin's 71 counties. Stocking work in 11 northern counties is of an experimental nature.

Under power granted by the 1931 legislature, the Wisconsin Conservation Commission now has authority to open seasons on upland game birds. Maps, illustrated in Part III, designate bag limits, and the counties open on upland game birds during 1931 and 1932.

Miscellaneous game projects

In order to test species of pheasants other than English ring-necks, and to test certain foreign varieties of partridge and quail, test plantings are being made in 12 Wisconsin counties on Reeves, Versicolor,



Reeves pheasant cock at state game farm.

Melanistic Mutant, and Mongolian pheasants, Hungarian, Valley, and Chukar partridge. The majority of plantings are being made in western and northern counties in the hope that a non-cyclic game bird can be found which will work in with native grouse and quail, and that eventually will produce good hunting. The experimental stocking program covers a five year period.

Approximately 140 wild turkeys were reared at the state game farm in 1931, and 235 were reared at the farm in 1932. The principal wild turkey stocking area lies along the Wisconsin river bottoms between Spring Green and Lone Rock in Iowa and Richland counties. It is estimated that there is a total of between 400 and 500 birds in this planting at the present time.

Other plantings include the Poynette planting in Columbia county, and the Yellow lake planting in Burnett county.

It is planned to continue with test wild turkey plantings for at least two more years before a definite program is adopted.

Approximately 200 mallard ducks were banded with state and biological survey bands, and were liberated at Moon lake in 1932. In addition, 100 mallards have been liberated at Puckaway lake in Green Lake county, and 100 birds have been liberated at Lake Koshkonong in Rock county, all banded with state and biological survey bands.

It was planned that the conservation department would develop its mallard stocking program on the basis of returns from these two experimental plantings. Returns of the banding were surprisingly large. Of the 200 banded birds released, there were 94 returned, of which 91 represented birds taken by Wisconsin hunters in Wisconsin. It was deemed by the department that this was a sufficiently large return to justify continuation of the experiment.

The conservation department is co-operating with the Wisconsin Raccoon Hunters' Association in its raccoon stocking program. Approximately 20 raccoon were furnished the association in each year of the biennium. A greatly enlarged raccoon stocking program is contemplated for 1933 and 1934, in co-operation with the association.

Test plantings of 1,000 pounds of wild rice were made in five counties in 1931 and 1932. Reports indicate that 80 per cent of the plantings have been most successful. Plantings were made in Eau Claire, Marquette, Oneida, Vilas, and Wood counties.

An experimental project on ring-necked pheasant propagation has been conducted in 1932 with 4-H clubs in Barron county in order to determine the practicability of stocking pheasants under the New York plan. About 200 eggs were allotted the Barron county groups from which 59 pheasants were reared and liberated. Club members were paid at the rate of 50 cents each for each bird released. The experiment will be continued on a larger scale in 1938.

The game division has for the past year worked in conjunction with the University of Wisconsin, county agents, and sportsmen's organizations in an attempt to bring about test areas for the utilization of game as a by-product. A special refuge has been approved by the conservation commission and department in Wood county, and in the event that funds are available, a test area should be in operation by the fall of 1988.

The fur bureau, in conjunction with the game division, is continuing to transplant trapped beaver to more suitable localities. Of particular interest are plantings in Adams, Juneau, and Wood counties in the drainage country districts.

Because of the lack of sanitary facilities, the game farm zoo was discontinued in 1931. In its place an educational exhibit of native and foreign game birds has been set up, showing from 20 to 25 varieties of game birds native to Wisconsin, game birds which are being experimentally stocked in Wisconsin, or game birds of particular interest to Wisconsin sportsmen. In addition, white-tailed deer and black bear are exhibited.

It is estimated that 25,000 people visited the game bird farm display in 1931-1932.

Due to the rarity of black squirrels and spruce grouse in Wisconsin sin, the game division during 1982 instigated a special survey resulting in the location of many of the existing coveys of spruce grouse in Wisconsin and the principal counties that the black squirrel inhabits. It is proposed, if necessary, to set up special sanctuaries in order to save these species in certain districts.

The game division, in co-operation with the division of public relations, has been engaged in 1932 in the acquisition of groups of mounted game birds for educational purposes. It is likewise collecting a series of interesting game display pictures.

Both the mounted groups and pictures have been displayed at expositions and at state and county fairs in 1931 and 1932.

Wisconsin flushing rod

The Wisconsin flushing rod was designed to be attached to a mowing machine to flush nesting birds in time to permit the operator of the mower to lift his knife to avoid the nest itself. Further experimental work with the rod during 1931 and 1932 revealed defects. It was not entirely satisfactory for use in heavy hay fields. Many improvements have been made over the first rods used in Racine county in 1931. It is felt that the use of such rods by Wisconsin farmers will do much to protect nesting birds. During the experiment several of these rods were furnished by the conservation department to co-operating farmers and many other farmers made rods of their own design.

Winter feeding

From an estimated 600 organized winter feeding stations in 1931, organized winter feeding stations in 1932 have increased to approximately 4,000. With use of the \$2,500 winter feeding budget set up in 1931–1932, 84 organizations in 57 counties put forth the most intensive winter feeding program in Wisconsin's history. One organization alone purchased 8,000 pounds of grain and established and set



Prairie chickens at tepee type of winter feeding station.

up 65 hopper feeding stations. Many individual sportsmen also carried on one or more feeding stations. There is no record of farmers' stations.

The principal game birds fed during 1931 and 1932 include sharptailed grouse, ring-necked pheasants, Hungarian partridge, and bobwhite quail.

Approximately 12,000 winter feeding bulletins were distributed in 1931-1932 to Wisconsin sportsmen.

Licensed shooting preserves

Through the licensed shooting preserve law, passed by the 1930 legislature, Wisconsin farmers and landowners have their first incentive to rear game from the standpoint of remuneration.

The bill creating the new licensed shooting preserve law was recommended by the conservation department with the full realization that there is a change coming about in Wisconsin's hunting conditions. The new law is in the nature of an experiment. With the co-operation on the part of the state department administrators and farmers and sportsmen, it is believed that eventually fee shooting will become an integral part of the Wisconsin hunting program.

Five licensed shooting preserves were established in Wisconsin in 1931. These have increased to 18 preserves in 1932, the smallest of which is 160 acres, and the largest approximately 3,000 acres.

Private game farms

Private game farms in Wisconsin have increased in number from 58 in 1980 to 102 in 1931, and 132 in 1932. They vary in size from half an acre to approximately 30 acres.

The principal game bird reared on Wisconsin game farms is the English ring-necked pheasant. Other pheasants include Mongolian,

Melanistic Mutant, Formosan, Chinese ring-neck, English black-neck, Golden, Silver, Amherst, Versicolor, Reeves, and ornamental varieties. A limited number of Hungarian partridge and Valley partridge are reared, together with a limited number of bobwhite quail. One or two breeders rear wild turkeys. About 30 per cent of commercial game farms deal in wild ducks, principally mallards, and wild Canada geese.

Private deer farms

Only 10 licensed deer farms were established in Wisconsin in 1930. These increased to 19 in 1931 and to 25 in 1932. A total of approximately 300 deer are registered on these farms. Wisconsin deer farms vary in size from four to 800 acres. Many Wisconsin deer farmers have reported a brisk business for 1931.

Private fur farms

Fur farms have been established in Wisconsin since 1923. There were but five licenses issued in that year. Licenses gradually increased until in 1930, 2,230 fur farm licenses were issued to Wisconsin fur farmers. These have decreased to 1,161 in 1931, down to 1,021 in 1932.

The majority of fur farmers breed muskrat. Approximately 65 bred beaver in 1931 and 1932. Combination fur farm licenses include otter, fisher, marten, skunk, mink, and raccoon.

Research bureau

Experiments, investigations, and surveys conducted by the game research bureau during the biennium have produced much practical information regarding the mortality rate in birds, migration, cover requirements, all year food requirements, and effect of predatory animals. With this information, it will be possible for farmers and other private landowners, including game farm proprietors and licensed shooting preserve proprietors and gun clubs, to greatly increase the number of game birds in Wisconsin.

The prairie chicken and sharp-tailed grouse were emphasized in the upland game bird study. The study included winter feeding, parasites, disease, the grouse cycle, and food studies. Much information of value regarding migration and mortality rate in seasons was obtained from the banding experiments conducted. During the two years there were 480 prairie grouse banded, of which 300 sharp-tailed grouse and 60 prairie chickens were banded in 1932. Returns from the birds banded in 1931 showed that the shift from winter to fall is from one to three miles, but that the same winter feeding grounds are used in succeeding years. There was very little mixing of flocks. It was determined by retrapping that the mortality rate in the Babcock area in Wood county from March, 1931, to March, 1932, was 50 per cent. The increase of young birds in 1931 more than made up for the loss, so that the flocks were larger in 1932 than in the preceding year.

The research bureau also helped in the studies of the artificial propagation of native game birds and in grafting growth curves for species both in artificial and natural propagation.

Considerable work was done in photography, both motion picture and still. Much of the motion picture film taken has been assembled into reels and is in constant use.

Part II—Section 9

LAW ENFORCEMENT

The dual responsibility of the law enforcement division to protect Wisconsin fish and game and at the same time protect the right of the state to charge a fee of its citizens and visitors for taking fish and game, has had its usual number of difficulties multiplied by the economic depression, with its incident sentimentality and prejudice.

Due to the increase in the number of men not profitably employed, there has been an increase in the number of hunters and fishermen. However, violations have increased in greater proportion than the number of people hunting and fishing, probably because of the class of persons who will take advantage of public sympathy toward unemployed people and violate the law with the hope of impunity. This is reprehensible and such people should be punished severely.

There has been an increased leniency on the part of courts and prosecuting attorneys also directly attributable to general economic conditions. In some cases, however, courts have failed to distinguish between petty or casual violations and malicious, commercial offenses. This lack of co-operation on the part of a few courts continues to be one of the greatest handicaps to efficient conservation law enforcement.

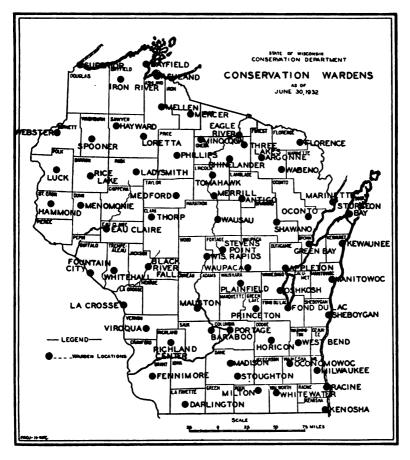
This increased leniency has an unfortunate effect on public morale toward conservation law enforcement. On the one hand the potential game law violator, thinking he can capitalize on public sympathy, will violate more brazenly. On the other hand, such leniency is likely to prove disheartening to conservationists in every locality who want to see laws enforced.

The depression is having another effect which will be more permanent in nature than any of the above. Any law enforcement agency depends for its success upon public sentiment. The crystallization of public sentiment is a gradual process. Certain types of conservation law violations, for instance, which today are considered reprehensible, 20 years ago were condoned. Other principles are in process of formation. Present measures of expediency may postpone the development of a crystallized public sentiment toward certain conservation principles which today are recognized as correct, but are not generally popular. Ice fishing is a good example. From a conservation standpoint, ice fishing is not desirable, yet because it has always been done, the public in times like these is slower to become educated to its undesirability.

Another outgrowth of general economic conditions which has affected all phases of conservation work, but law enforcement in particular, is the tremendous increase in the number of "shackers" who

have gone into the wilder sections of the state to live on the country. For the most part these people come from large cities, and to a very considerable extent, from large cities outside the state. Generally they are not taxpayers and have no interest in localities beyond what they can get for nothing. Game laws mean nothing to a large percentage of "shackers" and a jail sentence resulting from a violation would be welcome to many of them. The advent of so many indigent people presents a serious economic problem.

Looked at from a financial angle, law enforcement is of vital importance to the conservation program. Without a trained force of officers in the field, income from license sales would be practically negligible and bag limits would not be observed. The two ways of developing the wild life resources of the state are protection and production. Neither of these could be successful alone. Law enforcement protects the wild life resources that now exist as well as those which are to be produced.



Efficient conservation law enforcement assumes vital significance when it is considered that the protection of fish and game means the protection of one of the basic factors in attracting tourists. It is impossible to estimate the total value of Wisconsin's wild life, whether considered from the standpoint of attracting tourists, from the food value of the game and fish taken by citizens and visitors, from the in come derived from the sale of furs taken by licensed trappers, or from the esthetic value which cannot be reckoned in dollars and cents, but is none the less real. Further, without conservation law enforcement, the commercial fishing industries of the Great Lakes would rapidly decrease.

Lack of sufficient funds prevented enlarging the conservation warden force during the biennium. Some new men were added, but they replaced wardens who died in service.

Increased vigilance during both years of the biennium resulted in an increased number of cases. In the first year of the biennium there were 2,212 arrests, and in the second year 2,458, a larger number than had ever been made in a similar period of time.

All money resulting from fines imposed on game law violators goes into the state school fund. Prior to this biennium the activities of the law enforcement division of the conservation department benefitled the school fund to the extent of approximately \$50,000 a year. However, despite the increased number of arrests, because of the general economic conditions, the amount of fines decreased markedly. Although the amount of revenue from fines decreased, the percentage of convictions to total number of arrests remained high. In the first year of the biennium it was 87 per cent, and in the second year 83 per cent. This high percentage of convictions occurring even in a time of increased leniency by courts signifies the good judgment used by Wisconsin wardens.

Strict prosecution in several courts has been a factor in reducing commercial violations. During the second year of the biennium there was particular emphasis paid to the illegal killing, transportation, and sale of deer. Several well organized gangs were broken up which operated in the upper peninsula of Michigan as well as in Wisconsin. The co-operation of courts in heavy penalties and confiscations of cars contributed greatly to reduction of this type of violation.

The law enforcement division co-operated in making commercial fishing investigations and preparing recommended legislation covering the commercial fishing industry. It also made its facilities available to the Attorney General's office in preparing the Wisconsin case in the Michigan-Wisconsin boundary dispute now before the United States Supreme Court,

Noyes award

The Noyes conservation warden efficiency award was granted during the first year of the biennium to Warden Ernest Swift of Hayward, and during the second year to Warden Barney Devine of Web-

ster. The purpose of the award, which is given by Commissioner Haskell Noyes of Milwaukee, is to instill a feeling of friendly competition among the conservation wardens. The winning warden receives a silver watch and has his name engraved upon a silver plaque which hangs in the Madison office.

The bases of judgment for selecting the winning warden each year include the methods in which he handles his cases and seizures, his citizenship and general appearance, his co-operation with other divisions, his care in making reports and answering inquiries, and any unusual service rendered by the officer.

Part II—Section 10

PUBLIC RELATIONS

From the beginning there has been a dual purpose in the work of the division of public relations. Its objectives have been of an educational nature within the state, and advertising outside. In practice through its four years of existence, the educational purpose received the greater emphasis.

During the biennium all educational material prepared by the division stressed forest protection as the principal factor in a sound conservation program. An effort was made to show that all phases of the conservation program—forestry, fish, game, parks, beauty—were dependent for their very existence and future welfare upon a sound program of forest protection.

This emphasis upon fire prevention was done both directly and indirectly. It permeated all releases and several specific lectures and exhibits were prepared upon this subject.

Newspaper publicity

With the objective of reaching as many of the citizens of the state at the least possible expense, all the fields of educational media were



A pictorial exhibit prepared by the conservation department.

considered when the program was begun. These include newspaper and magazine publicity for the general public, lectures and illustrative material for organized groups, and specific educational material for The newspaper field in Wisconsin is thoroughly covered. Daily papers are reached through press associations and special correspondents. The division issues a weekly news release which goes to all weekly papers in the state, and a monthly summary listing arrests for conservation law violations and carrying general news of the department. This summary goes to all newspapers, daily and weekly, to judges, district attorneys, secretaries of sportsmen's organizations, and a large number of individuals. The newspapers of the state have co-operated excellently in the use of the material prepared by the division. The department has also prepared special news stories and articles for newspapers and magazines, both within and without the state. These are prepared upon request. Several magazines of national circulation have carried articles and pictures prepared by the division.

Public addresses

A large proportion of the work of the division has been in making public addresses. This has included the use of radio, lectures to interested groups, and co-operative meetings with teachers and in schools.

The radio program of the division may be divided into two parts, regular and special. Each week during the biennium, addresses were prepared and delivered by the division over the state radio station WHA at the University. As soon as the two state stations, WHA at the University, and WLBL at Stevens Point, were combined, the message went out over the two stations at the same time. The talks in this regular radio program were divided into two classes, those for school use, which went over the School of the Air program on Friday afternoon, and those directed to the general public, which went out over the farm program at noon.

All the radio stations in the state expressed co-operation with the department in forwarding messages and appeals to the public at times of particular fire hazard. These were prepared as short, terse statements, and a large number of them were furnished to all radio stations in the state. The wholesome response to these appeals indicates their effectiveness.

Speaking to interested organizations who request speakers has been a principal phase of the division's work. During the biennium an average of at least one lecture a week to such groups has been maintained.

In addition to the speaking which has been done in response to invitations, the division has been represented at nine teachers' institutes, two meetings of supervising teachers and county superintendents, and two state teachers conventions.

During the spring of 1932, the division superintendent spoke in



every school in two counties in a forest protection district, Oneida and Forest. All of these talks were illustrated lectures on the subject of forest protection.

A growing phase of the division's work is furnishing lecture material to interested conservationists for use in schools and before conservation organizations. There is an increasing number of requests for this type of service, which is maintained in addition to the extensive informational service of the division.

Photography

The photographic resources of the department were built up during the biennium. There are now 22 reels of motion pictures available for showing to any groups in the state. Several of these reels are distributed through the co-operation of the Milwaukee Public Museum.

Sets of lantern slides, principally on forestry and forest protection subjects, have been developed during the biennium. These are available on the same basis as the motion pictures.

The general photographic files have been considerably augmented. There are now approximately 5,000 pictures on file which are available for use in any publication, providing a credit line to the Wisconsin Conservation Department is given. Such use of pictures in magazines and newspapers, both in Wisconsin and outside the state, has a great advertising value.

Study courses

The division was working during the biennium to develop specific courses of study for interested organized groups, particularly women's



Exhibit at Minocqua exposition 1932.

clubs, as well as the supplementary outlines prepared for use of teachers in schools. These latter are prepared to co-ordinate the teaching of conservation principles with subjects now on the curriculum of the schools of the state. There is a growing demand for this type of material.

Fairs and exhibits

The division continued its work in preparing conservation exhibits for use at fairs, conventions, and outdoor shows. In addition to these specific presentations, there are several sets of display material available for distribution and use in school exhibits, Boy Scout, and similar conventions. The conservation department was also represented at the two conventions of the State Federation of Women's Clubs, at the state fair during both years, and at several county fairs.



Muskellunge displayed at Minoqua exposition, 1932.

In the summer of 1932, the department prepared an extensive exhibit at the outdoor show held at Minocqua. This was one of the most successful exhibitions of its kind ever held in the state, and the exhibit of the conservation department was the feature of the show.

Publications

Several manuscripts were prepared and published by the division in co-operation with other divisions of the department. These included Forest Planting Handbook; Wisconsin Licensed Shooting Preserve Law; Pheasant Propagation Handbook; state park pamphlets including Copper Falls State Park, Devil's Lake State Park, Potawa-

tomi State Park, Peninsula State Park, Nelson Dewey State Park; Forest, Field and Marsh Fire Laws; Forest Crop Law; Forest Fire Facts; Laws Relating to Conservation; and Summary of Wisconsin Game Laws.

Educational use of existing facilities

Plans are being prepared to develop a systematic educational utilization of the various facilities of the department, such as the forest ranger stations, lookout towers, nurseries, state parks, fish hatcheries, and game farms. The educational use of these facilities in the past has been unorganized. It is planned to organize them.

State Geographic Board

An important co-operative phase in the work of the division was that with the State Geographic Board created by the 1931 session of the legislature. The purpose of this board is to remove duplication of names of lakes and streams in the state and ultimately to publish a gazetteer listing the names of all geographic features in the state.

The conservation department was made the administrative agency. There has been a great deal of work incident to the examination of maps prepared by public agencies and the research necessary to find appropriate names for geographic features, either unnamed or duplicated.

Part III

This report has been prepared in three parts. In Part I is a discussion of policies and plans promulgated by the conservation commission for the guidance of the conservation department.

In Part II is a presentation of the activities of each of the various divisions of the conservation department for the biennium.

Part III is supplementary to Part II in that it presents graphically and statistically the activities of the various divisions of the department.

Part III-Section 1

ADMINISTRATION

FINANCIAL STATEMENT

of the

STATE CONSERVATION DEPARTMENT OF WISCONSIN

Fiscal Years of
July 1, 1930 to June 30, 1931
and
July 1, 1931 to June 30, 1932

Disbursements

	19301981	1931 19 32
General Administration\$	57,014.44	\$ 34,504.53
Parks division		
Administration	\$3,998.87	\$3,700,79
Peninsula	17.032.15	10,182.58
Devil's Lake	11.595.27	7.331.89
Interstate	4,803.63	3,887.94
Nelson Dewey	8,020.10	2,424.69
Pattison	288.50	2,824.18
Northern Forest	9,098.98	504.81
Brule	267.29	290.98
First Capitol.	52 .85	13.94
Tower Hill	1,774.08	690.57
Perrot	1,589.84	831.88
Cushing	813.86	374.24
Copper Falls	6,988.81	694.67
Terry Andrae	4,975.97	2,734.00
Potawatomi	140.29	367.27
Rib Mountain	402.07	3,240.82
Land Economic Survey	880.00	
-	\$67,162.82	\$38,498.75
Warden division	\$214,750.68	\$166,718.87
Fisheries division		
Administration	\$15.897.28	\$11.293.92
Madison.	14.481.78	8,610.15
Bayfield	18.947.08	15.825.85
Minocqua	7,670.80	7,585.85
Delafield	6,985.45	6,407.50
Wild Rose	14.485.77	18,820.15
Sturgeon Bay	5,586.64	4,408.43
Sheboygan	4,984.87	4,170.51
Spooner	68.22	871. 38
Eagle River	117.98	495. 39
St. Croix Falls	14,066.01	14,423 <u>.31</u> /
Westfield.	12,860.56	6,508.18
Hebron	1,205.99	101.70
Lakewood	17.08	15.91
Hayward	1,469.71	158.53
Osceola	20,008.82	21,772.46
Wisconsin Rapids	1,200.59	275.00
Eau Claire	4,685.11	2,587.00
Sparta	4,821.59	8,179.12

Antigo. Burlington Brule. Birchwood Transportation. Collection of spawn Lake Michigan research Removal rough fish, northern. Removal rough fish, Minnebago State Fair exhibit Haugen	\$1,827.02 8,498.35 1,779.20 998.46 17,237.15 24,505.59 1,807.53 6,768.26 8,497.56 88.58 19.95	\$15.08 4,940.98 23.36 224.93 13,846.96 8,677.20 3,599.30 1,484.27 2,153.56
Field Investigator	\$808.89	\$241.16
Game Division Game farm Fur bureau Winter feeding	\$48,185.85 8,786.09 \$46,871.93	\$55,606.84 5,459.33 1,260.69
Education and publicity Research bureau Park recreation Devil's lake boat Horicon dam Park lands	\$18,265.52 9,368.52 7,010.09 913.58 28,435.70	\$1,915.57 2,681.79 3,375.94 186.55 5.05
Forestry division Administration Forestry and fire protection Fire suppression Clarke-McNary fund Nursery County forests State forests Education and publicity Land inventory Lake States stations Blister rust control Wardens—forestry Land acquisition	\$ 100,436,89 215,580,69 51,054,60 23,435,17 3,307,00 2,811,94 19,20	\$14.576.96 348.208.80 81,838.66 6,183.52 60,346.38 16,754.05 24,804.07 11,007.84 4,190.11 2,720.00 596.53 27,181.00 1,019.42
*Bounties.	\$63,409.81	\$26,577.00
*Predatory animal control	14,081.71	11,242.24

^{*}The moneys expended for bounties and predatory animal control work were paid out of the conservation fund, but the fund was reimbursed for the amounts from the state general fund.

Receipts

	1980-1981	1981 19 32
Non-resident licenses Non-resident fishing licenses Non-resident fishing coupons Non-resident hunting licenses	\$187,051.50 6,954.90 11,600.00	\$161,604.55 4,983.90 8,000.00
Resident game licenses	\$205,606.40	\$169,588.45
Resident hunting licenses Settlers' hunting licenses Duplicate licenses Deer tags Trapping licenses	\$198,801.07 818.50 259.50 38,491.15 18.073.51	\$154,458.39 234.00 236.00 139.50 16.528.13
Trap tags	16,614.48 1,810.11	17,284.12 1,225.55
	\$268,868.32	\$190,050.69

WISCONSIN CONSERVATION COMMISSION

106

Resident fish licenses—commercial		
Clamming licenses	\$1,020.00	\$640.00
Set line licenses	2,525.00	2,193.65
Guide licenses	639.00	469.00
Sturgeon tags	000.00	280.98
Fish dealer licenses	2.225.00	1.925.00
Great Lakes fishing licenses	9.384.75	8,226.50
	2,014.45	1,672.00
Mississippi river fishing licenses	28.892.14	18.259.80
Rough fish		
Winnebago rough fish receipts	8,564.18	594.08
	\$49,764.52	\$34,261.01
General		
Confiscations	\$19.000.93	\$10,889.50
Wardens' fees	4.278.10	3.285.77
Game, fur, and deer farms	10.720.50	8.624.74
Taxidermist	10,120.00	480.75
Fur dealer licenses		5.820.10
Fur dealer neemses		8.539.32
Christmas tree licenses		
Interest	6,679.59	6,375.66
Refunds	1,206.28	722.66
Miscellaneous	2,298.04	1,401.52
Park rentals	5,673 .00	5,046. 23
Golf receipts	8,908.87	6,446.74
-	\$58,765.81	\$52,082.99
Forestry		
Clarke-McNary receipts	\$49.925.29	\$51,401.97
50-50 returns from counties	79.208.99	30.884.16
Nursery	2.881.55	1.476.50
Forestry mill tax	294.821.58	2,210.01
General forestry appropriation	204,021.00	600,000.00
General forestry appropriation		
	\$426,882.41	\$683,712.63
Grand total	\$1,009,886.96	\$1,129,695.77

SALE OF RESIDENT HUNTING AND TRAPPING LICENSES

	S	1927		1928		18	626	•	1980		81	1881
	Hunting Licenses	Trapping Licenses	Hunting Licenses	Deer	Trapping Licenses	Hunting Licenses	Trapping Licenses	Hunting Licenses	Deer	Trapping Licenses	Hunting Licenses	Trapping Licenses
	87.8	141	960	195	16.1	878	148	1 007	150	119	987	188
-	1 849	800	2 750	2 456	894	1 148	887	828	9. 871	351	788	8 8 8 8
	200	454	8 227	208	315	228	707	8,773	2,715	7	850	488
	2899	469	2,013	1.956	486	1.578	528	2.285	2.184	401	916	355
	5.032	278	201	1.872	287	4.679	271	5.430	1.647	258	4.812	285
	791	. 204	1.023	150	289	927	418	988	195	244	814	245
	715	22	1.384	1.211	296	798	279	1.559	1.875	261	882	886
	1 098	25	1.043	186	302	1 008	802	1.186	199	278	805	171
Chippewa	8.108	489	4.178	2.426	298	2 902	248	4.735	2.750	883	8.458	286
-	2 178	755	2.810	1,695	415	8 042	611	8.857	1.870	270	8.174	88
	888	455	2 846	285	210	679	211	2 962	822	808	2 640	687
	107	8	1 897	12	200		200	1 220	S	122	800	289
	020	767	2000	66	27.6	7 961	100	30	-	25	200	200
	7.0	26	, 600	3 8	2 6	200,0	25	1,004	1007	- 00	0,0	95
	4,041	420	200.0	8 :	25.	0,000	120	101,4	9 6	200	210,0	
	7,1,2	25	1,320	121	200		0.0	1,020	202	200	7,007	140
	1,833	155	4,210	8,721	200	1,626	9	9,60	900	100	2,2,3	607
Dung	700.1	200	27.7	000	*	1,014	220	2,200	33	3:	1,300	410
	200,000	717	0,040	1,318	104	202,202	967	4,121	1,041	200	2,332	100
Llorence	200	25.5	017	200	140	620	727	200	9	3:	400	021
ac	487.	264	3,927	290	24.0	8,826	250	4,0,4	790	250	2,426	36
		192	1,700	1,004	200		200	100	7,10	200	90.10	77
	2,489	243	2,391	3	222	2,713	270	0,100	140	200	2,000	404
	2,140	100	7,300	100	100	756.1	200	200	101	979	1,2,4	56
	100.1	000	1,400	36	167	1,100	770	1,004	717	607	2001	966
	1,400	227	970	2 5		2004	100	076	82	166	100	691
	169	1016	986	1,001		88	200	27.7	450	35	1 980	128
	7,107	250	910	200		100	3 ?		316	100	2440	961
	000.7	760	107	200		3	27.0	1,012	95	200	706	920
	1,000	200	700	107		102.0	200	000	207	200	010	141
:	7,007	100	200,1	101		700.7	500	100	676	901	2000	17.
	20.1	9:5	1,010	7.25		5	1 2	1,124	757	067	200	1 0
LA Crosse	2,419	240	670.	1/8		70,7	38	400.0	200	701	2,000	35
	1,613	3	1,100	200		104.1	970	1,034	8	102	1,402	200
	1,957	566	8,074	2,486		2,019	747	8,838	21.72	808	2,432	920
	1.451	248	2,329	2,252		1,621	898	2,967	2,412	777	1,980	214
	3,965	523	3,788	513		3,662	286	4,076	581	487	8,561	200
Marathon.	5,256	797	6.241	2,899	•	4,172	712	7.161	3.157	475	6.407	401
	-	-	•	֡								

SALE OF RESIDENT HUNTING AND TRAPPING LICENSES—Continued

# H	Trapping Licenses	3	760	199	983	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	182	2	287	55 56 56 56 56 56 56 56 56 56 56 56 56 5	192	2	112	25.8	874	246	548	088	198	200	200	278	88	823	365	196	828	459	102	202		19,622
1981	Hunting Licenses	8	20 102	2,187	2,879	20.00	147	455	1,808	1,868	8,818	1,114 0,000	2,200	4.265	1.665	1,040	2,771	1,845	1,988	9, 101	1,967	1 228	1,058	1.984	1,106	2,204	8,420	3,881	1,606	4, 187		176.294
	Trapping Licenses	,	96	208	260	240	9	8	286	872	200	7.5	1016	898	852	267	199	271	241	38	100	255	260	192	177	198	214	289	200	282		18.940
1980	Deer																													28.08	1	77,284
	Hunting Licenses		24.875	2,166	2,960	8,095	1,20	909	1,505	2,196	3,465	2,040	4,004	888	2.750	1,409	8,058	1,730	2,368	4,114	1,91	1	1.986	2,797	1,896	2,418	8,966	4,209	35	206.8		219.748
6261	Trapping Licenses	8	88	297	391	450	148	119	286	108	358	100	808	24	289	874	822	486	810	200	AB I	8	810	289	493	8	427	88	20.0	889		28.912
19	Hunting Licenses	9	99. 487	1,820	2,161	1,680	100.1	411	1,241	1,880	2,821	000	0.00	1981	1.176	1,145	2,667	708	1,689	670.0	1,130	208	845	2,480	865	2,144	8,672	3,656	1,487	3.216		168,467
	Trapping Licenses	200	98	210	851	619	129	78	248	4	202	5	914	300	429	256	169	118	35	787	679	828	256	268	184	622	127	1,156	Ş	808		28,158
1928	Deer																													1,856		69.049
	Hunting Licenses		21.549	2,445	2,00	2,882	971	670	1,782	2,140	8,145	9,410	4,080	4.676	2.478	1,484	2,887	1,868	288.	6,018	1,001	2.089	1.780	2,511	1,680	2,161	889.	796,8	1	8,580		201,219
1	Trapping Licenses	è	26	246	529	808	181	11	206	461	861	200	181	263	411	267	246	841	220	100	458	161	274	816	260	262	255	1,069	\$14	882 282		22.262
1927	Hunting Licenses	,	19.847	2,301	2,570	1.600	085	340	1,885	1,821	8,202	010	1 448	485	1.154	1,109	8,189	595	2.286	2,200	1 845	786	780	2,688	718	2,287	8,788	4,183	2,800	8,706		174,511
	Sumo		Milwankee	Monroe	Oconto	Oneida	Ozankee	Pepin	Pierce	Polk	Portage	Profes	Richland	Rock	Rusk	St. Croix	Sauk	Sawyer	Shawano	Spenoy gan	Trempeleen	Vernon	Vilas	Walworth	Washburn	Washington	Waukesha	Waupaca	Watenara	Wood	1000	Total

Note: Deer tag sale only in years in which there is a deer season.

WISCONSIN CONSERVATION DATES

	Chapter	Year
Fish Inspector	77	1866
Commission to Investigate Forestry Conditions	86	1867
Timber Agents.	46	18 69
Timber Agents. Commissioner to Receive Spawn.	258	1874
Fish Commissioners	299	1878
Fish Commissioners Establishment of first State Park	824	1878
Game Wardens	456	1887
Fish Wardens	455	1887
State Fish and Game Warden	486	1891
Commissioners of Fish and Fisheries	221	1895
Chief clerk of land commission made State Forest Warden	266	1895
Commissioners to Plan for Forestry Department	229	1897
Sale of first State Park lands	867	1897
Interstate Park Commission	102	1899
Interstate Park Commission	805	1901
State Department of Forestry	450	1908
Provision for purchasing state forest reserve	450	1908
Commissioners of Interstate Park of the Dalles of the St. Croix	895	1905
State Board of Forestry	264	1905
State Forester	264	1905
State Park Board	495	1907
Superintendent of Fisheries	548	1907
First Conservation Commission	644	1911
Adverse Supreme Court forestry decision	***	1915
Second Conservation Commission	406	1915
Third Conservation Commission—Conservation Commissioner	118	1928
Fourth Conservation Commission	426	1927

Part III—Section 2 FOREST PROTECTION

FOREST PROTECTION—PERSONNEL AND EQUIPMENT

December 31, 1932

	Forest Protection District Number	-	81	••	4	ю	•	2	x 0	6	10	==	Total
I. Personnel *District Rangers Rangers Dispatchers Emergency fire wa	District Rangers. Rangers. Bangers. Emergency fire warders.	66 66	14	1410	nr-100	14	1 5 53	52	4-14	1 7 1 68	- s - s	1 2 1 2 7	11 52 11 478
II. Structures **Towers by New tow New tow Rebuilt t Rebuilt t Towers s Old towers Total toy	**Structures **Towers beginning of biennium **Vew towers on old locations **New towers on hew locations **Rebuilt towers on old locations **Rebuilt towers on new locations **Rebuilt towers on new locations **Towers strengthened Old towers unaltered Total towers	600	F-61-1-40	11 4 1	∞∞ ⊣ ∞∞	0 H HH100	98 1 90	8 2 1 8 1	10 10 10	100001	10	8 1 4 7 10 10	89 14 108 108
District headque Ranger stations GaragesTower cabinsTelephone line-of the phone Telephone Total telephone Total telephone.	District headquarters. Ranger stations. Garages abins. Tower cabins. Telephone line—state owned. Telephone line—state wire on other poles.	1 1 187.0 196.0	74.0	179 . 6 16.8 196.8	67 7. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2.	112.0	31.0 85.0 66.0	88.00 6.00 7.00 7.00 7.00	29 29 29 29 29	88.0 96.0	4.88.9 19.5 68.44.9	55.0 75.5	11 7 8 13 985.4 205.8
III. Major equipment Tractors—craw Trackes—15 too Trucks—16 tod Promo—16 incl Fremoe Fremoe Fremoe Fremoe Fremoe Fremoe Fremoe Fremoe Fremoe Fremoe Fremoe Fremoe Fremoe Fremoe Fremoe Fremoe Fremoe	Tractors—crawler type Tractors—crawler type Tractors—15 ton Trucks—1 and 1 ½ ton Plows—16 inch bottom Pumpers Evigrade	H-875-H-64	- 1000 M	4ro	HHR4H M	HH0.4H 01				H 10 80 H 08			27 10 20 11 12 13 13 13 13 13 13 13 13 13 13 13 13 13

FOREST PROTECTION—PERSONNEL AND EQUIPMENT—Continued

December 31, 1932

Forest Protection District Number	-	64	••	4	kó.	9	t	∞	6	10	=	Total
100	-	1	1	1	-	-	-	1	1	67	87	13
	4,900	5,000	10,350	7.680	7,400	8,750	9,500	5,500	7,900	4,450	1,5002	78,930
Water tanks for 19 ton trucks. Water tanks for 1 and 1 % ton trucks.	lug.		1		04 00		01 sp	63	63	2	4.000	8,28
IV. Fire fighting tools Fire tool boxes.	ž	8	61	-	12	2	\$	8	33	16	80	\$30
Back pack pumps	272 82	161	277	176 98	18 28	160	311	267 181	88 80 80 80 80	124	88	2, 663 1,158
Grub hoes Mattocks	22.23	26	15	8,12	e 5	<u>\$</u>	9 9	ន	80 6	ដ	6	8 12 12 13 13 13 13 13 13 13 13 13 13 13 13 13
Pick axee	101	12	*	-	3	22	7-1	8	3			3
Shovels—long handle	25	88	98	213	10	114	88	187	88	9	88	648
Cross-cut saws	9		88	24.	200	1 5	200	946	200	181	98	9
Brush scythes	9		4	-	8	2	4	16	-	24	18	82
Brush forks	01 oc	00 rG	40	48	200	- 15	9 4	81	8 28	9.4	1	8
Cant hooks	ေ		61	23	**	88	00	20	<u>.</u>		•	20
Back fire torch	g°		10	36	220	47	8	28	3.5		68	<u> </u>
Pack sacks	1 60	9	·	· ·	3	2	œ	3	5 10			3
Galvanized pails	247		877	666	8	766	201	916	181	Z	0	1 957

* In addition to the district rangers there are four supervising area wardens.

SUMMARY OF FOREST AND MARSH FIRES FOR THE YEAR 1931 AS REPORTED BY DISTRICT FOREST RANGERS

District	No. of Fires	Per cent of Total Fires	Acres Burned	Acreage burned per fire	Reported damage
1	198 251 141 208 147 885 827 138 282 188	8.8 10.7 6.0 8.7 6.8 14.8 14.0 9.9 9.9	57,890 88,551 9,198 94,958 64,800 121,204 78,429 87,209 81,968 25,240 41,542	800 832 65 468 441 862 225 270 188 184	\$46,710.90 45,555.85 27,541.25 63,190.15 21,621.10 80,826.70 48,252.75 19,220.35 87,242.80 15,418.70 15,420.90
Total or average	2,840	100	640,979	274	\$421,500.95

FIRES BY CAUSES-1931

District	Light- ning	R. R.	Log- ging	Clear- ing	Camp Fires	Smok- ers	In- cend- iary	Misc.	Un- known	Total
1 2	0 4 6 2 0 0 0 1 0 0 0 0	5 9 9 4 10 7 7 8 15 10 18	1005 007 051 0	28 64 25 17 18 65 105 58 86 61 21	5 18 80 16 7 20 17 7 28 2	87 73 51 20 86 53 29 40 15 2	2 65 9 80 10 37 58 0 52 8	10 17 7 28 9 88 10 29 4 6	110 6 4 36 57 120 94 0 29 98 78	198 251 141 203 147 836 827 138 232 188 185
Total	18	92	19	548	150	407	880	159	627	2,340
Per cent	0.6	8.9	0.8	28.2	6.4	17.4	14.1	6.8	26.8	100.

FIRES BY MONTHS-1931

District	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.
1	0 8 0 0 1 0 8 0 4 5 2	108 120 41 108 81 198 167 71 115 78	45 72 40 62 44 98 84 45 62 85	1 8 8 5 4 3 1 2 2 8 8	16 22 25 11 8 5 8 4 12 24	4 4 15 4 2 7 6 4 80 83 40	18 14 12 18 5 21 50 10 5 18	10 0 5 0 1 2 7 1 1 2 8	1 8 0 1 1 1 1 1 0
Total	28	1,122	608	40	170	149	188	87	18
Per cent	1.0	48.0	25.7	1.7	7.2	6.4	7.8	1.6	0.6

FIRES BY AREA CLASSES-1931

	A	В	С	D	E
District	Under ¼ acre	1/4 to 10 acres	11 to 100 acres	101 to 500 acres	500 acres and over
1	6	56	65 90 22 77	87 55 10 45	29
2	11 38	64 64 33	90	55	81
8		64	22	10	7
3	0	88	1 77	45	48 17
0	0 15 40 0	54	46 125	80	17
7	10	78 73	125	74 55	48 87
.	40	86	47	00 45	10
å	16	65	102	45 86	10 18
0	2	56	71	47	12
1	4	50	76	89	16
l'otal	182	629	843	473	268
Per cent	5.6	26.9	86.1	20.2	11.2

COSTS AND AREAS BURNED

Year	Total cost of Pro- tection	Area under protection in millions acres	Cost per acre in cents	Number of fires	Area burned over	Acreage per fire	Per cent of area burned	Damage
1928	\$187,751.90	12.5	1.1	2,300	44,189	108	.35	\$ 27,627
1929	164,660.28	13.5	1.22		108,888	109	.77	72,770
1980	812,855.22	13.6	2.8		518,856	223	8.8	460,627
1981	384,260.44	13.1	2.9		640,979	274	4.89	421,501
1982	488,612.14	13.1	8.8		119,458	88	.91	69,320

EXPENDITURES

Year	Contributed by State	Contributed by Federal Government	Contributed by Counties	Total Cost of Protection
1929	\$ 110,989.71	\$ 38,187.40	\$ 15,583.17	\$ 164,660.28
1930	188,181.85	48,788.48	85,940.44	312,855.22
1931	268,622.80	51,819.05	63,818.59	384,260.44
1932	814,801.49	67,015.00	52,295.65	433,612.14

ALLOTMENT OF EXPENDITURES

Year	Administrative expense	Field Personnel	Equipment and Im- provements	Fire Fighting	Total Cost
1929	\$ 3,000.00	\$ 77,645.51	\$ 52,848.40	\$ 31,166.37	\$ 164,660.28
1980	6,857.82	108,112.49	81,084.52	171,880.89	812,855.22
1981	17,848.18	156,181.28	82,643.80	127,687.18	884,260.44
1982	89,616.95	198,876.85	90,527.08	104,591.81	488,612.14

SUMMARY OF FOREST AND MARSH FIRES FOR THE YEAR 1932 AS REPORTED BY DISTRICT FOREST RANGERS

District	No. of Fires	Per cent of Total Fires	Acres Burned	Acreage burned per fire	Reported damage
1	285 311 189 382 185 350	9.0 9.8 4.4 10.5 5.8 11.0	6,959 26,927 1,832 5,544 4,190 15,922	24 86 13 17 22 45	\$ 8,858.02 10,771.80 8,759.00 2,762.50 1,058.15 18,070.00
8	362 221 894 283 356 	7.0 12.4 7.8 11.4	10,198 13,854 16,176 4,964 12,892	28 68 41 21 36	9,181.25 6,844.45 5,711.80 3,477.85 8,875.50 \$ 69,320.32

FIRES BY CAUSES-1932

District	Light- ning	R. R.	Log- ging	Clear- ing	Camp fires	Smok- ers	In- cend- iary	Misc.	Un- known
1	1 2 1 7 2 2 0 0 4 0 1	12 17 8 8 7 10 10 17 18 14 22	1 0 1 0 4 1 0 1	69 66 15 54 88 92 118 41 98 60 160	11 11 31 38 13 10 15 17 29 7	129 63 58 50 89 78 75 120 83 46 181	85 65 25 102 14 72 75 21 56	27 19 8 28 13 36 20 5 63 10 24	0 68 2 45 14 46 48 0 97 85
Total	20	188	8	801	194	867	482	253	405
Per cent	0.6	4.8	0.2	25.4	6.1	27.4	15.2	8.0	12.8

FIRES BY MONTHS-1932

District	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.
1	0 0 0 0 0 0 0 0 8	78 122 85 72 88 88 117 88 47 71	36 69 21 57 30 49 58 18 38 17 62	18 26 24 87 15 24 21 27 13	11 21 9 44 44 27 17 44 91 29	58 26 41 95 41 66 68 65 118 21	26 20 7 18 8 8 35 25 18 49 14	68 25 2 9 9 59 58 17 24 40 68	0 2 0 0 2 0 0 2 0 0 2 2 0 2 2 2 2 2 2
l'otal	8	804	455	253	356	612	255	369	61
Per cent	0.1	25.4	14.4	8.0	11.1	19.4	8.0	11.7	1.9

FIRES BY AREA CLASSES-1932

	A	В	C	D	E
District	Under 1/4 acre	1/4 to 10 acres	11 to 100 acres	101 to 500 acres	500 acres
1 2	16 40	170 147	82 85	15 30	2 9
84	26 50	72 209	40 61	10	0 2
6	81 22 22 22	105 180 180	41 117 141	27 19	4
8 9	0	108 218	94 79	20 18 9	· 4
0	71 86 141	188 189	54 62	9	1 5
Potal	455	1,656	856	165	36
Per cent	14.4	52.8	27.0	5.2	1.1

AREA AND DAMAGE BY CAUSES-1982

Causes	Light- ning	R. R.	Log- ging	Clear- ing	Camp fires	Smok- ers	In- cend- iary		Un- known	Total
Acres burned Damage (dollars)		8,090 1,285		17,266 9,677		i -	l '	1	25,257 12,452	119,458 69,820

Part III—Section 3

UNEMPLOYMENT RELIEF

A-Report of Expenditures

Of \$500,000.00 appropriated to the Conservation Department \$493,-467.25 was allocated to approved projects designed to relieve the distress of the unemployed and to develop and augment the facilities for forest protection.

During the year 1932 the Conservation Department expended a total of \$464,221.08 on these projects. Of this amount the sum of \$396,691.98 or 85.45% was expended in the form of wages.

The total wages paid consist of the following items:

Wages to foremen, operators of trucks and equipment	,
and laborers	_\$348,181.06
Wages to teamstersCamp, board and keep	_ 7,448.67
Total Wages	

Table I
TABLE BY DISTRICTS SHOWING NUMBER OF PROJECTS,
LABOR EXPENDITURE, AND TOTAL EXPENDITURE

Dist. No.	No. of Projects	Counties making up Districts	Labor Expend- iture	Total Expend- iture	Per cent of labo Expenditure to Total Expenditure
1	80	Bayfield and Douglas	\$ 87.848.00	\$ 41,865.74	90.24%
1 2	66	Burnett, Polk, Wash-		l' - '	
-	1	burn	27,479.07	29,788.20	92.25%
8	86	Iron and Vilas	38,489.44	47,889.88	81.30%
8 4	82	Florence, Forest,	•		
		Marinette	50,140.68	58,885.82	85.88%
5 6	89	Marinette	29,258.80	88,894.87	86.31%
6	46	Ashland, Iron, Price,			
	1	Taylor	47,668.18	59,429.18	80.21%
7	84	Chippewa, Rusk,			
		Sawyer	81,985.17	88,815.48	82.27%
. 8 9	25	Lincoln, Oneida	88,508.05	85,800.55	94.91%
9	88	Langlade, Marathon,			
	l	Oconto, Shawano	40,170.15	42,810.90	98.88%
10	88	Clark, Eau Claire,			
	1	Jackson, Monroe	80,915.84	84,078.04	90.78%
11	82	Adams, Juneau,	00 007 07	05 000 10	90 177
	ł	Portage, Wood	28,075.75	25,877.17	89.17%
oor Co.		Door	4,719.40	4.958.22	95.18%
isc.	. 5	All districts	1.998.50	12.168.08	16.39%
15C		All districts	1,380.00	12,100.00	10.00 /6
otal	416		\$896.691.98	\$464,221.08	85.45%

The work accomplished was divided into 416 separate projects. Table I shows by forest protection districts the number of projects worked upon, the counties making up each district, the amount expended for labor, the total amount expended, and the percentage of labor expenditures to total expenditures.

These expenditures have been further analyzed to show in which counties projects are located and how much money was expended in these counties. Table II shows the labor expenditure and the total expenditure, and the percentage of each which has been apportioned to each of the thirty counties in which work was done.

Table II
APPORTIONMENT OF EXPENDITURES TO COUNTIES

No.	County	Labor Expenditure	Per Cent of Total	Total Expenditure	Per Cent of Total
1		\$ 11,620.66	2.92%	\$ 12,495.99	2.69%
2	Ashland	27,880.88	7.08	83,718.89	7.26
8	Bayfield	11,902.08	8.00	12,815.74	2.76
2 8 4 5 6 7	Burnett	10,723.90	2.71	10,752.20	2.32
5	Chippewa	1,484.02	.87	1,570.06	.83
6	Clark	11,483.47	2.88	12,589.74	2.71
7	Door	4,719.40	1.19	4,958.22	1.06
8	Douglas	25,395.07	6.40	28,480.27	6.14
.9	Eau Claire	8,570.14	.90	8,910.48	.84
10	Florence	15,408.78	8.89	18,028.71	8.88
11	Forest	\$ 31,301.86	7.89%	\$ 86,898.87	7.84%
12	Iron	24,556.95	6.19	32,281.14	6.96
18	Jackson	13,766.12	8.47	15,193.09	8.27
14	Juneau	7,368.16	1.86	8,146.99	1.76
15	Langlade	27,657.81	6.97	29,286.99	6.81
16	Lincoln	12,299.60	8.10	12,795.66	2.75
17	Marinette	82,526.89	8.20	37,699.61	8.12
18	Monroe	2,058.71	.52	2,828.05	.50
19	Oconto	8,352.24	2.10	8,846.07	1.91
20	Oneida	21,208.45	5.35	22,504.89	4.85
21		\$ 799.20	.20%	\$ 799.20	.17%
22	Portage	178.49	.04	199.50	.04
23	Price	14,078.05	8.55	16,917.50	3.65
24	Rusk	11,978.09	8.02	15,817.69	8.40
25	Sawyer	17,808.68	4.86	20,180.22	4.84
26	Shawano	4,160.60	1.05	4,677.84	1.01
27	Taylor	8,788.68	.95	4,545.48	.98
28	Vilas	16,822.19	4.24	20,234.85	4.86
29	Washburn	15,917.77	4.02	18,148.41	3.90
80	Wood	8,670.64	.92	8,981.64	.85
	Undistributed	2,785.55	.71	14,082.69	. 3.04
	Total	\$ 896.691.98	100.00%	\$ 464,221.08	100.00%

A statement of expenditures showing the purposes for which money was expended is shown in Table III.

Table III STATEMENT OF EXPENDITURES

% of Total	21.52.23.28.28.29.20.29.20.29.20.29.20.29.20.29.20.29.20.29.20.29.20.29.20.29.20.29.20.20.20.20.20.20.20.20.20.20.20.20.20.	100.00
Total Ex- penditure	\$ 41,386.74 29,788.20 66,389.89 66,389.89 89,894.87 88,829.18 88,800.55 87,800.55 84,073.04 45,868.22 12,163.08	\$464,221.08 100.00%
Other Expense	\$ 164.38 886.41 81.24 29.20 27.24 289.44 828.91 46.90 126.06 221.01	\$ 2,852.87 .50%
Admin- istration	898.54 2,170.71	\$ 2,569.25 .56%
Supplies, Repairs	\$ 305.46 878.07 4278.45 424.37 1,824.17 810.00 163.71 7221.19 794.84 7,998.87	\$12,948.72 2.78%
Gas, Grease and Oil	\$ 459.66 171.07 171.07 494.06 722.93 1.017.10 714.16 111.65 748.69 688.72	\$ 6,119.88 1.82%
- 1	\$ 1,828.56 868.35 1,408.32 1,430.24 4,909.11 2,788.16 10.00 897.26	\$17,189.42 8.70%
Dynamite, Equipment Fuses, Caps	\$ 1,279.78 676.28 676.28 8,676.18 5,866.77 2,288.11 1,113.86 2,229.84 1,574.06	\$26,854.01 5.68%
Camp Board	\$ 2,511.85 864.00 1,064.40 2,738.29 226.18	\$ 7,448.67 1.61%
Team Hire	\$5,275.73 2,860.70 3,603.55 5,603.85 2,986.60 8,192.88 6,731.20 6,731.20 8,775.55 2,027.57	\$41,062.25 8.84%
Labor	29, 560, 42 24, 264, 37 44, 480, 86 44, 480, 86 41, 682, 38 28, 484, 71 33, 717, 39 37, 772, 26 27, 772, 26 47, 719, 98 47, 719, 719, 719, 719, 719, 719, 719, 71	\$348, 181.06 75.01%
District Number	2 8 8 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	Totals

B—Employment

12,790 men were given employment. These men had a total of 40,209 dependents or an average of 3.14 dependents for each man employed. The average wage per man employed was \$31.02.

This information is shown by districts in Table IV.

Table IV

NUMBER OF MEN EMPLOYED, NUMBER OF DEPENDENTS

AND AVERAGE WAGE

District No.	No. of Men Employed	Total Wages	Average Wage Per Man	Number of Dependents	Average No. Dependents Per Man
1 2 3 4 5 6 7 8 9 10	1,047 879 1,276 1,427 834 2,332 1,072 876 1,224 997 590	\$ 37,348.00 27,479.07 38,489.44 50,140.68 29,253.80 47,668.18 81,935.17 83,508.05 40,170.15 30,915.84 28,075.75	\$ 35.67 31.26 30.16 35.14 35.08 20.44 29.79 38.25 32.82 31.01 39.11	2,996 3,448 8,848 4,850 2,630 6,283 3,743 2,803 4,245 3,194 1,961	2.86 3.92 2.62 3.40 3.15 2.69 3.49 3.20 3.47 3.20
Door Co	225 11	\$ 4,719.40 1,998.50	\$ 20.98 181.28	675 88	8.00 8.00
Total	12.790	\$ 396,691.98	\$ 31.02	40,209	8.14

In order to show which counties have benefited by employment for relief purposes, Table V has been prepared, showing the number of men employed from each of the thirty-five counties from which labor was secured.

Table V
NUMBER OF MEN EMPLOYED BY COUNTIES

No.	County	mployed	Per Cent of Total
1	Adams	384	2.61%
2	Ashland	1,228	9.56
8	Barron	_5	.04
4 5 6 7	Bayfield	875	2.98
5	Burnett	349	2.73
6	Chippewa	67	.52
7	Clark	248	1.94
8	Columbia	1	.01
9	Door	225	1.76
10	Douglas	671	5.24
11	Eau Claire	287	1.86
12	Florence	884	2.61
18	Forest	992	7.75
14	Iron	978	7.65
15	Jackson	389	2.65
16	Juneau	152	1.19
17	Langlade	798	6.20
18	Lincoln	861	2.82
19	Marinette	942	7.87
20	Monroe	184	1.05
21	Oconto	259	2.02
22 28	Oneida	515	4.03
28	Polk	27	.21
24	Portage	1	.01
25	Price	828	6.43
26	Rusk	316	2.47
27	Sawyer	621	4.86
28	Shawano.	165	1.29
29	Taylor	270	2.11
30	Trempealeau	35	.27
81	Vernon	1	.01
32	Vilas	375	2.93
33	Washburn	506	3.96
84	Waushara	5	.04
35	Wood.	100	.78
	Miscellaneous	11	.09
	Totals	12,790	100.00%

In order to show roughly the sources from which labor was obtained and to show to what degree labor was obtained from the immediate locality in which the projects are located, Table VI has been prepared in percentages. Employment on miscellaneous projects and the projects in Door county have not been included in this compilation. The number of men employed on these projects was comparatively small and if included would materially affect the percentages otherwise obtained.

Dist. No.	Per Cen' Labor En., JV. ployed from I Towns in which Projects are located	ar cent of abor Em- aloyed from arby Towns	Per Cent of Labor Em- ployed from Nearby Cities	Per Cent of Labor Em- ployed from Outside County	Total Per Cent
1 2 3 4 5 6 7 8 9	72.67 72.15 67.62 80.45 86.66 57.06 64.26 54.60 66.42 27.30	9.33 16.98 24.29 11.80 11.54 18.02 15.88 25.60 31.30 20.61	18.00 8.27 7.91 7.75 1.80 11.74 19.86 19.80 2.18 87.06	2.60 .18 .18.18 	100 100 100 100 100 100 100 100 100
Door Co.	50.87 (2.00)	26.93 (80.00)	18.58 (18.00)	4.17	100 (100)
Totals	68.59	19.80	18.90	8.21	100

Table VI SOURCES OF LABOR IN PERCENTAGES

The percentages in parentheses are not included in computing totals.

Common labor was paid at the rate of 25 cents per hour for the first four weeks and at the rate of 30 cents per hour thereafter. Foremen, grader-men, and tractor operators were paid at a rate of from 35 cents per hour to 40 cents per hour. Teams and trucks were hired at local prevailing rates.

In computing the figures shown in columns g, h, i, and j of Table VII it was assumed that the average wage for all classes of labor was 30 cents per hour in all districts except miscellaneous projects, where 53 cents was used. The total man hours was computed by dividing the total wages by the average hourly wage. This was divided by the number of men employed to give the average number of hours worked per man. By dividing this figure by eight the average number of eight hour days worked per man was obtained.

The rotation of labor or average number of periods for which each man was employed was obtained by dividing the total number of times men were employed by the actual number of men employed. By dividing the average number of days each man worked by this ratio, the average number of days in each period of employment was obtained.

The total number of times men were employed is the total number of times men worked on all projects. When one man worked on two or more projects he was considered to have worked as many times as the number of projects on which he worked. The transferring of labor from one project to another during the same period of employment was discouraged as much as possible.

PERIODS OF EMPLOYMENT AND AVERAGE NIMBER OF DAYS WORKED PER MAN

	(8)	(q)	9	(g)	(e)	(3)	(2)	(J)	(I)	(f)
Dist. No.	No. Times Men Were Employed	Total Wage	(b/a) Ave. Wage Per Time Employed	Actual No. Men Employed	(a/d) Rotation of Labor	Average Wage per Hour	(b/f) Man Hours	(g/d) Ave. Hours Worked Per Man	(h/8) Ave. Days Worked Per Man	(i/e) Ave. Days Per Period of Em- ployment
1 8 8 6 6 7 7 7 10 10 10 10 Misc. Proj.	1,968 1,576 1,576 2,087 2,027 1,964 1,964 1,421 1,421 1,421 1,421 1,421	\$ 37, 348, 00 27, 479, 07 88, 489, 44 50, 140, 68 29, 258, 80 47, 668, 18 81, 986, 17 83, 508, 05 26, 076, 76 1, 993, 60 1, 998, 60 1, 998, 60 1, 988, 60	\$ 18.98 17.45 17.00 17.00 19.05 18.24 17.16 19.87 17.16 16.24 16.24 16.24 18.29	1,047 879 1,276 1,276 1,276 1,072 1,072 1,274 1,275 1,275 1,130	1.38 1.73 1.00 1.00 1.65 1.65 1.66 1.67	**************************************	124, 488.3 91, 588.1 122, 298.1 167, 183.6 167, 183.6 111, 610.6 111, 610.6 113, 900.5 108, 919.2 76, 919.2 16, 781.3 16, 781.3	118.9 104.2 110.5 110.5 116.9 116.9 118.9 118.9 118.8 118.8 118.8 108.4 108.2	418.8 418.8 418.6 41	6.87.48.60.18.48.67.77.77.77.77.77.77.77.77.77.77.77.77.
								-		_

C-Work Accomplished

The total expenditures classified according to the type of work accomplished are as follows:

Type of Work Accomplished 1	otal Expenditure	% of Total
New fire roads	\$374,299.17	80.62
Fire breaks		8.76
Fire hazard elimination		2.30
Construction labor		4.02
Miscellaneous	19,916.72	4.30
Total	\$464,221.08	100.00

The above classifications will be discussed in the following paragraphs.

New fire roads:—1,020 miles of new fire road were constructed at a total cost of \$374,299.17 or an average cost per mile of \$366.96. In constructing these roads, 17,497 rods of fill, 266 bridges of an average length of 22.7 feet, 764 culverts and 299 gates were installed. These figures are shown by districts in Table VIII.

Table VIII
NEW FIRE ROADS

Dist. No.	No. Miles	Cost	Cost per Mile	Rods of Fill	No. of Bridges	Tot. Ft. Bridges	No. of Cul- verts	No. Gates
1 2 8 4 5 6 7 8 9 10	66.8 51.2 189.8 90.6 102.7 111.7 58.5 111.3 171.2 86.5 30.2	\$ 33,156.71 16,279.11 44,519.98 53,647.21 82,479.67 56,603.90 38,196.61 84,605.05 40,740.05 20,564.69 8,506.19	\$500.10 317.95 805.35 592.13 816.26 506.75 567.46 810.92 237.97 237.74 281.66	2,389 1,005 1,402 1,533 1,810 1,938 464 1,860 1,167 3,009 920 17,497	18 4 22 31 48 39 14 28 48 15 4	459 390 592 767 849 1,004 145 403 1,175 163 86	100 15 205 88 40 137 71 65 30 11 2	11 5 25 36 84 28 19 40 54 85 12

Fire breaks:—342.2 miles of fire breaks were constructed at a total cost of \$40,655.40 on an average cost per mile of \$118.81. In constructing fire breaks 323 rods of fill, 11 bridges of an average length of 18.6 feet, 13 culverts and four gates were installed. These figures are shown by districts in Table IX.

Table IX
FIRE BREAKS

Dist. No.	No. Miles	Cost	Cost per Mile	Rods of Fill	No. of Bridges	Tot. Ft. Bridges	No. of Cul- verts	No. Gates
1 2 8	12.6 176.9	\$ 2,078.86 10,288.20	\$164.59 57.85	100 3			5 3	
4 5 6 7	1.5	288.80 572.80	192.58		2	20	i	
8 9 10 11	63.1 83.6	12,451.79 15,085.45	197.33 179.85	52 168	8 1	167 18	4	4
	842.2	\$40,655.40	\$118.81	323	11	205	18	4

Fire hazard elimination:—The work accomplished under this classification consisted of the following:

Type and Am	nount of Work Accomplished	Total Cost
	of snag cutting at an average cost per of \$47.84	
per :	f road slash, burned at an average cosmile of \$26.85	. 2,188.41
cost	f telephone line brushing at an average per mile of \$13.32	. 2,530.15
30 acres o	of park and other slash disposed at ar age cost per acre of \$33.33	n . 9 9 9.9 0
	Total hazard elimination	\$10,669.82

Construction labor: Practically the entire expenditure under this classification was for labor. Supplies and materials have been changed to other funds wherever possible. The work accomplished under this classification consisted of the following:

Type and Amount of Work Accomplished	Total Cost
21 New towers	\$ 3.845.84
12 Tower replacements	1,567.43
8 Tower relocations	971.82
Tower repairs	
Addition to ranger station buildings	
Improvements to ranger station buildings	1,781.99
Repairs to ranger station buildings	78.00
190.9 miles of new telephone line at an average cost of	
\$35.86 per mile	6,846.26
Improvements to old telephone line	2,768.25
Total construction labor	\$18,679.97

BIENNIAL REPORT

Miscellaneous: The work on expenditures under this classification are as follows:

Type of Work	Total Cost
Construction of gates not distributed to projects Miscellaneous brushing (12 mi. at \$45.81 per mi. an	
695 acres at \$7.13 per acre)	_ 5,507.91
Cruising Tower cabin construction	_ 327.90 _ 235.90
Administration and supervision	
Tower Foreman Tools and supplies not distributed to projects	_ 8,455.58
Transportation not distributed to projects Miscellaneous expenditures	
Total miscellaneous	

Part III—Section 4

FORESTRY—STATE FORESTS AND REFORESTATION

CLASSIFICATION OF STATE OWNED LANDS

County	Commissioners Public Lands June 30, 1982* Trust Fund Lands	Conservation Commission Dec. 31, 1982 Forestry Lands	Total
Adams	289.82		289.82
Ashland	3.708.85	360.00	4.063.35
Barron	120.20	000.00	120.20
Bayfield	1.190.96	239.58	1.430.54
Buffalo	550.42		550.42
Burnett	4.587.31	1.114.85	5,701.66
Chippewa	324.24		824.24
Clark	1,105.80		1,105.80
Columbia	107.80		107.80
Crawford	5.51		5.51
Oodge	160.00		160.00
Ooor	144.40		144.40
Ouglas	1,211.02	6,151.92	7,862.94
Qunn	684.50		684.50
Cau Claire	494.75		494.75
lorence	3,498.86	80.00	8,578.36
orest	34,964.44	2,245.47	37,209.91
Grant	48.15	6,578.24	48.15 28,266.87
ron	21,693.68	6,518.24	
ackson	1,806.99 160.00		1,806.99 160.00
uneau	127.27		127.27
A Crosse	1,298.42	920.00	2,218.42
incoln	1,204.32	920.00	1.204.32
Marathon	160.00		160.00
Marinette	4.885.91	447.10	5,888.01
Marquette	176.61	441.40	176.6
Monroe	600.00		600.00
Oconto	11,787.91		11,737.91
Oneida	34,557.56	87.404.84	71,961.90
Outagamie	1.617.21		1.617.21
epin	48.60		48.60
Pierce	68.87		63.87
Polk	1,185.85	606.40	1,792.25
Price	18,906.69	1.037.69	19,144.88
Richland	6.82		6.32
Rock	80.00		80.00
Rusk	2,258.51		2,258.51
Sawyer	10,714.84	2,865.50	18,079.84
hawano	5,999.49		5,999.49
Caylor	2,082.54		2,082.54
rempealeau	199.90		199.90
ernon	558.49	:::::-	558.49
/ilas	15,184.81	116,745.90	131,880.71
Washburn	3,268.46	488.15	8,701.61
Waupaca	40.00		40.00
Wood slands (1912 Grant)	526.06	812.08	526.06 812.06
BERNUS (1912 Grant)		812.00	812.00
Total	194,285.79	177,586.72	871,822.51

Note —The above table does not include any state park lands. *From Biennial report of Commissioners of Public Lands 1932.

CLASSIFICATION OF STATE OWNED LANDS WITHIN WISCONSIN STATE FORESTS

Name of Forest	Location (county)	Forest Land*	Trust Fund Lands** Acres	Total
Brule River Northern State American Legion Flambeau River	Douglas Vilas Oneida Sawyer	3,711 102,140 17,456 883	280 1,782 320 2,128	8,991 108,922 17,776 2,961
Total		124,140	4,510	128,650

^{*} Under jurisdiction of conservation commission
** Under jurisdiction of commissioners of public lands

ANNUAL OUTPUT OF TROUT LAKE STATE FOREST NURSERY

Year	For Private	For State	Total
I ear	Planting	Planting	Output
	- I talleting		
1911		192,800*	-
1912		18,000**	
1918		68,500	68,500
1914	20,200	458,430	478,680
1915	77,400		77,400
1916	110,200	216,650	826 ,850
1917	272,105	882,525	604,680
1918	246,278	262,485	508,768
1919	200,151	809,900	510,051
1920	206,682	118,875	820,557
1921	199,601	255,925	455,526
1922	89.482	88,710	123,192
1923	177,260	176,800	354,060
1924	247,000	168.800	410.800
1925	350.588	160,700	511.288
1926	748,497	424.200	1.172.697
1927	1.038.249	579,000	1.617.249
1928	1,101,464	637,200	1.738.664
1929	1,393,267	1,022,750	2.416,017
1980		981,500	2,166,575
1981	1,304,250	2.050.350	3,854,600
1982	880,315	5,701,500	6,581,815
Total	9,798,014	14,209,600	23,797,814

^{*} Stock secured from Michigan State College ** Stock purchased.

OUTPUT OF TROUT LAKE NURSERY

Species	19	81	19	32
Species	For Private Plantings	For State Plantings	For Private Plantings	For State Plantings
White pine	59,950	181,100 474,000 1,208,500 4,500 176,150 6,100	227,000 297,200 14,950 96,115 188,275 56,775	837,900 2,858,600 573,700 180,800 1,222,800 77,700
	1,304,250	2,050,850	880,815	5,701,500
Total output		3,354,600		6,581,815
Total output for biennium				9,986,415

DISTRIBUTION OF FOREST PLANTING STOCK TROUT LAKE NURSERY—1931

County	General Distribution	Extension Planting	State Planting	Total
			Į.	
dams	2,200	5,000 20,000	35,000	5,00 57,20 2,00
Barron	2,200	20,000	35,000	31,20
Bayfield	1.000	2,000		
Brown	4,000	2,000		4,00
Buffalo	1.000	18,000		14,00
Burnett	1.000	10,000	-	1,00
alumet	1 2,000			1 -,••
hippewa	5,500	6,000		11,50
lark	3,500	18 200		21.70
olumbia	15,550	18,200 5,200 19,600		21,70 20,78
rawford		19,600		19,60
ane	26,250	2,800		28.54
odge	1,500	1,200		2,70
oor	20,400		25,000	45,40
ouglas	12,550	4,800		16.8
unn	2,000			2.00
au Claire	14,000	5,100		2,00 19,10
lorence	. 	2,000		1 X.O.
ond du Lac	4,000	2,000 2,500		6,5
orest		18.000		18,00
rant	7,500	2.400	11,000	20,90
reen	1.000	l 5.900		6,9
reen Lake	8,000	1,000		4,0
)W8	2.000	13,500		15,54
on	16,100 3,250			16,10
ickson	3,250			8,2
efferson	! 4.850	2,000		6,8
ineau	2,000			2.0
enosha	1,000	2,000		8,00
ewaunee	2,000			2,0
a Crosse	5,400	27,000		82,40
afayette	1,000	::::-		1,0
anglade		15,400		15,40
incoln	2,000			2,0 10,0
Innitowoc	9,000	1,000		10,0
Iarathon	1,000	3,900		4,9
[arinette	97,000	87,000		184,0
[arquette	8,000	3,000		6,0
[ilwaukee	87,950	1,750 2,600	{ -	39,70
fonroe	1,000	2,000		8,64 4,00
neida	4,000	8,500	260,100	274,6
utagamie	11,000 4,500	5,000	200,100	9,5
zaukee	10,000	2,500		12,5
epin	10,000	10,200		10,2
ierce	5,500	18,100		18.6
olk.	2,500	9 004		4,5
ortage	14,150	18 900	l	1 Y7 X
rice	8 500	2,000 18,200 12,000		20 5
acine	8,500 2,200	12,000	1.000	20 5 8,2
ichland	2,200		1,550	l
ock	6,000	8,300		14,8
usk		6,100		6,1
. Croix	8,000		1	1 8.04
uk	6.500	8,400	l	9,9 11,7 2,8
wyer	2,500	9.200		11.7
nawano	1,000	1,800		2.8
neboygan	88,400		2.000	40.4
aylor	76,000	2,750		78,7
rempealeau	2,600	1,500		4,10
ernon	5,500	l		5.5
ilas	40.800	7,400	1,716,000	1,763,7
alworth	4,000			4,0
ashburn		9,000		9,0
ashington	18,400	7,000 7,000		20,4
aukesha	1 22.000	7,000		29.0
aupaca	l 8.800	10.400		18,7
aushara	l 16.800	28,000	250	44,5
Vinnebago	1.000	l	[1.00
700d	256,000	11,900		267,9

DISTRIBUTION OF FOREST PLANTING STOCK TROUT LAKE NURSERY—1932

County	General Distribution	Extension Planting	State Planting	Total
_				
Adams		5,000	1,000	6,000
Ashland		6,200		6,200
Sarron	E 400	8.700		14,100
BayfieldBrown	5,400 1,000 2,000 4,000	8,100		1,000
Buffalo	2,000	18,400		15,400
Burnett	4.000	20,400		4,000
Calumet	1			
Chippewa	1,000	17,500		18,500
lark		15,000 15,250 15,000 1,500		18,000
olumbia	2,000	15,250		17,200
Crawford		15,000		15,000
Pane	1,500	2,000	· • • • · · · · · · • •	3,000 2,000
Door	4,000	5,600		9,600
Douglas	32.800	80,000	195,000	257,800
Ounn	02,000	900	100,000	900
Cau Claire	4,975			4,975
lorence	l	8,000		8.000
Fond du Lac	4,000	1 2.000		6.000
orest	1,000	31,000	- -	32,000
rant		6,500		7,500
Green				
Green Lake	2,000	2,000		4,000
ron	1,000 12,000	6,000 4,000		7,000 16,000
sckson	12,000	4,000		1,400
efferson	1,400 5,000	8,900		8,900
uneau	1,800	2,000		8,800
Kenosha				
Kewaunee		11,000	. <i></i>	11,000
La Crosse	18,300			13,800
alayette	-			
anglade	1,000	88,000		84,000
incoln	5,000	500		5,500
Manitowoc		2,000		12,000
Marathon		17,000 41,000		26,000 75,000
Marquette	1,000	15,400		16,400
Milwaukee	2,000	10,400		2,000
Monroe	2,000	4,600		4,600
Deomto				
Oneida	5,800	45,940	1,475,000	1,526,240
Outagamie		9,550		9,550
Dzaukee	9,200			9,200
Pepin		1,500		1,500
Pierce Polik	15,000	15,000		15,000 17,700 14,350 18,200
Polk Portage	15,000	2,700 11,250 18,200		17,700
Price	8,100	19 200		19 200
Racine		10,200		8,000
Richland	3,300			
Rock		12,500		15,250
Rusk		24.900		24,900
St. Croix	2,000 10,700 1,000	5.000		7,000
S auk	10,700	3,650 9,200		14,350 11,20
Sawyer	1,000	9,200	1,000	11,200
Shawano				
Sheboygan		2,500	1,000	10,50
Taylor		1,250 1,800		1,250 1,800
Vernon		1,000		1,00
Vilas.	40,950	11,650	4,028,500	4,081,10
Walworth	5,000	11,000	1,020,000	5.00
Washburn		16,000	1	5,000 16,000
Washington	6,000	5,500		11,500
Waukesha	17 000	6.500		23,500
Waupaca	. 8.800	12,700 20,900		16,500 88,700
Waushara	. 12,800	20,900		88,70
Winnebago	. 1,000	8,550 11,350		4,550 11,850
Wood		11,350		11,850
Totals	811,275	569,040	5,701,500	6,581,818
4 UMAN	. 011,210	1 503,040	0,101,000	0,001,810

INVENTORY OF STOCK IN TROUT LAKE NURSERY TRANSPLANTS

Species	Age	Height in Inches	1981 Number	1932 Number
White pine	2-1	2"- 8"	290,000	
Norway pine	2-2 2-1	5"— 8" 2"— 4"	70,000 521,000	240,000
Scotch pine	2-2 2-1	6"—10" 2"— 4"	187,000 101,000	806,400
Norway spruce	2-2 2-1	6"—10" 2"— 4"	65,000 181,000	77,000
	2-2 2-8	4"-11" 6"-14"	116,000 80,000	150,000 16,200
White spruce	2-1 2-2	2"— 4" 4"—11"	129,000 121,000	191,000 211,100
Total transplants			1,811,000	1,191,700

SEEDLINGS

Species	Age	Height in Inches	1981 Number	1982 Number
White pine	1-0 2-0 8-0 1-0	2"- 8"	470,000 450,000	679,000 96,000
Norway pine	8-0 1-0 2-0 3-0	8"-6" 2"-8" 4"-7"	180,000 1,200,000 850,000 190,000	4,417,000 92,000
Scotch pine	4-0 1-0 2-0	6"—12" 2"— 8"	250,000 45,000 110,000	248,000 57,000
Norway spruce	1-0 2-0 8-0	2"- 4" 8"- 8"	185,000 820,000 74,000	2,880,000 84,000
White spruce	1-0 2-0 8-0	2"— 4" 8"— 7"	60,000 275,000 225,000	490,000 85,000 210,000
Jack pine	4-0 1-0 2-0	8"— 4"	140,000 280,000 82 5,000	5,987,000
Total seedlings			5,529,000	15,125,000
TOTAL INVENTORY		.	7,840,000	16,316,700

STATE PLANTING PROJECTS

1932 SPRING PERIOD

Forest	Camp	Acres	Norway Pine	White Pine	Scotch Pine	Jack Pine	Norway Spruce	White Spruce	Number of Trees
Brule River Brule River American Legion American Legion Northern State Northern State	Brule Gordon Lake Tomahawk McNaughton Oxley Trout Lake Nebish	746 897 1,094 11,490 474 995	287,200 248,640 240,050 210,100 852,150 860,800 271,678	163,500 98,500 1,600 102,118	22,000 44,100 68,900	56,800 111,180 158,250 125,000 44,900 460,163	66,000 28,550 395,000	184,000	729,000 408,920 1,149,230 425,802 1,872,150 896,700 883,959
	Total	5,607	2,410,118	365,618	125,000	950,798	1,241,380	217,902	5,810,761

FALL PERIOD

892,000	1,891,568 1,405,278 428,600	4,411,486	284,202 9,722,197
21,000	45,000 1,40 45,800 1,40	66,800 4	284,202
17,000	45,000	62,000	1,808,880
63,000	8,250 45,000 45,000 45,800	247,000	133,250 1,197,798 1,808,880
86,500	8,250	8,250	133,250
86,500	467,978 119,890 25,000	69,368	5,738,636 1,064,986
204,500	1,870,385 1,056,088 898,600	8,328,518	
402	1,741	4,457	10,064
Gordon		Total	Grand total
Brule River Thunder Mountain	Northern State Northern State American Legion		

CLASSIFICATION OF WISCONSIN TIMBER BEARING LANDS BY ACRES

		BY ACK	ES		
County	Woodland Pastured*	Woodland not Pastured*	Cutover Lands**	Timber Lands**	Total Farm Lands and Timber Lands
	NOR'	THEASTER	IN AREA		
Florence Forest Langlade Marinette Oconto Shawano	13,231 18,120 56,462 66,226 72,084 94,766	9.829 11.282 16.929 31.182 18.722 48,439	203,898 480,466 847,751 701,080 480,067 295,963	68,384 181,166 51,434 10,199 25,889 82,876	86,444 210,568 124,825 107,607 116,145 170,581
Total	320,889	131,388	2,408,720	368,898	
	N	ORTHERN	AREA		
Ashland Iron Lincoln Marathon Oneida Price Taylor Vilas	38,383 12,005 65,461 213,979 25,664 68,178 75,739 13,860	11,920 7,617 21,504 40,535 18,647 29,745 31,863 5,017	490,803 807,542 400,500 642,455 509,555 618,569 484,863 290,699	23,155 87,963 49,827 26,852 28,138 9,400 7,421 85,521	78,458 107,585 136,292 281,366 72,449 107,323 115,023 54,398
Total	518,269	166,848	8,744,486	267,777	947,894
	NOR'	THWESTE:			
Barron Bayfield Burnett Chippewa Douglas Dunn Polk Rusk St. Croix Sawyer Washburn	146, 333 79, 788 86, 780 116, 863 57, 086 143, 008 163, 882 61, 185 70, 729 37, 668 61, 708	18,960 30,753 17,018 31,385 24,986 22,198 15,664 16,458 7,285 15,206 18,032	287,770 760,428 422,118 308,815 598,347 180,355 829,070 479,228 88,725 586,557 415,563	17, 951 18, 560 11, 407 58, 204 40, 284 48, 684 22, 018 16, 840 15, 171 96, 957 5, 288	183,244 129,096 115,205 201,452 122,256 213,885 201,564 94,483 93,185 149,825 85,028
Total	1,025,015	217,895	4,401,966	846,814	1,589,224
		CENTRAL .	AREA		
Adams Buffalo Clark Eau Claire Jackson Juneau La Crosse Marquette Monroe Pepin Pierce Portage Trempealeau Waushara	60,585 108,910 138,008 54,928 79,217 73,085 49,018 127,929 36,796 73,226 65,975 81,412 46,844 71,518	27,695 51,121 18,242 23,163 39,693 27,6147 15,232 88,340 7,974 35,989 85,449 27,434 12,648	241,348 146,718 436,236 171,662 388,428 267,511 107,414 151,368 212,708 66,809 116,730 200,021 109,580 106,122 257,564	29, 354 50, 165 48, 906 25, 652 68, 775 42, 488 24, 575 78, 937 9, 296 7, 039 32, 715 96, 082 48, 474 17, 776	117, 684 210, 196 205, 156 103, 743 182, 685 144, 271 140, 527 88, 625 240, 206 59, 032 88, 239 134, 679 212, 913 117, 752 101, 942
Total	1,188,844	400,688	2,980,764	608,878	2,147,900

CLASSIFICATION OF WISCONSIN TIMBER BEARING LANDS BY ACRES-Continued

County	Woodland Pastured*	Woodland not Pastured*	Cutover Lands**	Timber Lands**	Total Farm Lands and Timber Land
	sout	TH WESTER	RN AREA		
olumbia	44,087	15,188	148,862	41,750	101,020
rawford	128,979	11,456	150,858	60,862	200,797
ane	78,622	15,408	107,159	65,714	154,789
rant	185,200	20,817	95,575	81,382	286,899
reen	25,197	7,215	80,512	19,177	51,589
owa	87,489	12,465	97,296	42,968	142,917
afayette	28,779 116,089	5,139 10.612	1,127 96,515	6,484 42,628	40,402 169,324
lock	24.724	5,717	49.407	25.758	56.199
auk	98.587	35,421	214.149	34.676	168.684
ernon	161,920	20.785	184.070	50,646	233.301
Valworth	38,211	2,487	56,893	21,665	57,818
V &LW 01 411				21,000	
Total	957.884	162,100	1.176.418	493,200	1,618,184
	800	THEASTER	IN AREA		
rown	43,186	7 000			
		7,080	77,811	870	51,086
alumet	15,269	8,581	85,845	9,908	88,758
alumet	27,829	8,581 7,201	85,845 158,111	9,908 15,884	88,758 49,864
Salumet	27,329 87,729	8,581 7,201 26,449	35,345 153,111 108,811	9,908 15,884 24,349	88,758 49,864 88,527
alumet	27,329 87,729 22,004	8.581 7,201 26,449 5,721	35,345 153,111 103,811 90,340	9,908 15,884 24,349 18,266	88,758 49,864 88,527 40,991
alumet	27,329 87,729 22,004 16,485	8.581 7,201 26,449 5.721 5,505	35,345 153,111 103,811 90,340 71,680	9,908 15,884 24,349 18,266 15,872	88,758 49,864 88,527 40,991 87,812
alumet	27,329 37,729 22,004 16,435 22,092	8,581 7,201 26,449 5,721 5,505 6,462	35,345 153,111 103,811 90,340 71,680 101,892	9,908 15,884 24,349 18,266 15,872 6,728	88,758 49,864 88,527 40,991 87,812 35,282
alumet. odge loor ond du Lac reen Lake efferson	27,329 87,729 22,004 16,485 22,092 12,197	8.581 7,201 26.449 5.721 5,505 6.462 801	35,345 153,111 103,811 90,340 71,680 101,392 25,671	9,908 15,884 24,349 18,266 15,872 6,728 5,701	88,758 49,864 88,527 40,991 87,812 35,282 18,699
alumet Oodge Ooor Oond du Lac Freen Lake efferson (enosha	27,329 37,729 22,004 16,435 22,092 12,197 22,151	8.581 7.201 26.449 5.721 5.505 6.462 801 18.856	35,345 153,111 103,811 90,340 71,680 101,892 25,671 50,941	9,908 15,884 24,349 18,266 15,872 6,728 5,701 7,173	88,758 49,864 88,527 40,991 87,812 35,282 18,699 48,180
alumet Odge Oor Ond du Lac irreen Lake efferson Lenosha Lewaunee fanitowoc	27,329 87,729 22,004 16,485 22,092 12,197 22,151 29,544	8.581 7.201 26.449 5.721 5.505 6.462 8 13,856 21,964	35,345 153,111 103,811 90,340 71,680 101,392 25,671	9,908 15,884 24,349 18,266 15,872 6,728 5,701	88,758 49,864 88,527 40,991 37,812 35,282 18,699 43,180 72,642
alumet Dodge Oodge Ood u Lac Freen Lake efferson Lenosha Lewaunee danitowoc dilwaukee	27,329 37,729 22,004 16,435 22,092 12,197 22,151 29,544 6,585	8.581 7.201 26.449 5.721 5.505 6.462 801 13.856 21.964	35,345 153,111 103,811 90,340 71,680 101,892 25,671 50,941 82,799	9,908 15,384 24,349 18,266 15,872 6,728 5,701 7,173 21,135	38,758 49,864 88,527 40,991 37,812 35,282 18,699 48,180 72,642 7,031
alumet Dodge Oodge Ood u Lac reen Lake efferson Lenosha Lewaunee fanitowoc tiiwaukee uutagamie	27,329 37,729 22,002 16,435 22,092 12,197 22,151 29,544 6,535 40,011	8.581 7.201 26.449 5.721 5.505 6.462 801 13.856 21.964 10.616	35,345 153,111 103,811 90,340 71,680 101,392 25,671 50,941 82,799	9,908 15,384 24,349 13,266 15,872 6,728 5,701 7,173 21,135	88,758 49,864 88,527 40,991 37,812 35,282 18,699 43,180 72,642 7,081
alumet Jodge Jooge	27, 329 37, 729 22, 004 16, 435 22, 092 12, 197 22, 151 29, 544 6, 535 40, 011 11, 330	8,581 7,201 26,449 5,721 5,505 6,462 801 13,856 21,964 496 10,616 4,645	35, 345 153, 111 103, 811 90, 340 71, 680 101, 892 25, 671 50, 941 82, 799 127, 640 23, 045	9,908 15,384 24,349 18,266 15,872 6,728 5,701 7,173 21,185	38, 758 49, 864 88, 527 40, 991 37, 812 35, 282 18, 699 43, 180 72, 642 7, 081 63, 330 18, 051
alumet Jodge Joor Jodge Joor Jodge Joor Jodge Joor Jodge Joor Jodge Jodg	27,329 37,729 22,002 16,435 22,092 12,197 22,151 29,544 6,535 40,011	8.581 7.201 26.449 5.721 5.505 6.462 801 13.856 21.964 10.616	35, 345 153, 111 103, 811 90, 340 71, 680 101, 892 25, 671 50, 941 82, 799 127, 640 23, 045 46, 206	9,908 15,384 24,349 13,266 15,872 6,728 5,701 7,173 21,185	88,758 49,864 88,527 40,991 37,812 35,282 18,699 48,180 72,642 7,081 63,330
alumet Joodge Jo	27, 329 37, 729 22,004 16,485 22,092 12,197 22,151 29,544 6,535 40,011 11,330 17,028	8.581 7.201 26.449 5.721 5.505 6.462 801 13.856 21.964 4.645 1.360 17.371 7.856	35, 345 153, 111 103, 811 90, 340 71, 680 101, 892 25, 671 50, 941 82, 799 127, 640 23, 045	9,908 15,384 24,349 18,266 15,872 6,728 5,701 7,173 21,185	88, 758 49, 864 88, 527 40, 991 37, 812 35, 282 18, 699 43, 180 72, 642 7, 081 63, 330 18, 051 27, 129 62, 118
alumet loodge loodge lood du Lac reen Lake efferson lenosha lewaunee fanitowoc filwaukee utagamie saukee lacine heboygan Vashington Vaukesha	27, 329 37, 729 22,004 16,435 22,092 12,197 22,151 29,544 6,585 40,011 11,330 17,028 20,081	8,581 7,201 26,449 5,721 5,505 6,462 801 13,856 21,964 496 10,616 4,645 1,360 17,371	35, 345 153, 111 103, 811 90, 340 71, 680 101, 392 25, 671 50, 941 82, 799 127, 640 23, 045 46, 206 49, 181	9,908 15,384 24,349 18,266 6,728 5,701 7,173 21,185 12,703 2,076 8,741 24,666	38, 758 49, 864 88, 527 40, 991 37, 812 35, 282 18, 699 43, 180 72, 642 7, 031 63, 380 18, 051 27, 129 62, 118 48, 890
alumet Joodge Jo	27, 329 37, 729 32,004 16,435 22,092 12,197 22,151 29,544 6,535 40,011 11,330 17,028 20,081 27,957 31,408 67,967	8.581 7.201 26.449 5.721 5.505 6.462 801 13.856 21.964 4.645 1.360 17.371 7.856 3.575	35, 345 153, 111 103, 811 90, 340 71, 680 101, 892 25, 671 50, 941 82, 799 127, 640 23, 045 46, 206 49, 181 41, 710	9,908 15,384 24,349 18,266 15,872 6,728 5,701 7,173 21,185 12,703 2,076 8,741 24,666 12,577	88, 758 49,864 88,527 40,991 37,812 35,282 18,689 43,180 72,642 7,081 18,061 27,129 62,118 44,380 45,506
alumet Jodge Joodge 7, 329 37, 729 22, 004 16, 435 22, 092 12, 197 22, 151 29, 544 6, 535 40, 011 11, 330 17, 028 20, 081 27, 957 31, 408	8.581 7.201 26.449 5.721 5.505 6.462 801 18.856 21.964 4.645 1.360 17.871 7.856 3.575	35, 345 153, 111 103, 811 90, 340 71, 680 101, 392 25, 671 82, 799 127, 640 23, 045 46, 206 49, 181 41, 710 68, 971	9,908 15,384 24,349 13,266 15,872 6,728 5,701 21,135 12,703 2,076 8,741 24,666 12,577 8,527	88,527 40,991 37,812 35,282 18,699 43,180 72,642 7,031 63,330 18,051 27,129	
alumet Oodge Ooor Oond du Lac Freen Lake efferson (enosha	27, 329 37, 729 32,004 16,435 22,092 12,197 22,151 29,544 6,535 40,011 11,330 17,028 20,081 27,957 31,408 67,967	8.581 7.201 26.449 5.721 5.505 6.462 801 13.856 21.964 4.645 1.360 17.371 7.856 3.575	35, 345 153, 111 103, 811 90, 340 71, 680 101, 892 25, 671 50, 941 82, 799 127, 640 23, 045 46, 206 49, 181 41, 710 68, 971 178, 452	9,908 15,384 24,349 13,286 15,872 6,728 5,701 7,173 21,135 12,703 2,076 8,741 24,666 12,577 8,527 49,454	83,758 49,864 88,527 40,991 37,812 35,222 18,699 43,180 7,031 63,330 18,051 27,129 62,118 44,390 43,506 149,718

^{*} United States Farm Survey 1980 ** State Tax Commission Report 1980

Part III—Section 5

FOREST CROP LAW AND COUNTY FORESTS

ENTRY OF FOREST CROP LANDS BY COUNTIES

Ę	Total Forest Crop Lands	26, 426, 23 69, 618, 128 28, 120, 128 15, 120, 139 10, 126, 138 24, 647, 142 24, 647, 144 24, 647, 144 24, 647, 144 24, 647, 138 11, 126, 138 11, 175, 118 11, 175, 175 11, 175, 175 11,
	Net County Lands	57, 175, 78 30, 185, 78 97, 073, 89 56, 127, 82 27, 071 26, 387, 90 66, 944, 78 66, 944, 78 12, 677, 27 12, 677, 27 12, 677, 26 12, 677, 27
res	With- drawn	2 2 2 2 2 2 2 2 2 2 2 2 3 3 6 4 4 6 0 0 4 4 6 0 0 4 4 6 0 0 4 4 6 0 0 4 4 6 0 0 4 4 6 0 0 4 4 6 0 0 4 4 6 0 0 4 4 6 0 0 4 4 6 0 0 4 4 6 0 0 4 4 6 0 0 4 4 6 0 0 0 4 4 6 0 0 0 0
COUNTY ENTRIES	1982	67, 225, 78 80, 118, 78 88, 211, 51 16, 488, 64 16, 488, 64 49, 882, 06 49, 882, 06
ООО	1981	61,416.88 61,416.88 61,416.88 61,416.99 6,696.98
	Prior to 1981	9 862 84 14,008 43 8,013 72 8,013 72 8,967 01
	Net Pri-	26, 426, 83 26, 426, 83 12, 441, 956, 87 1, 196, 88 1, 177, 89 1, 177, 89 1, 177, 89 1, 172, 61 1, 172, 61
RIES	With- drawn	2.481.42 621.80 821.80 443.44 443.44 80. 80. 6.445.26 289.87 160. 120. 120. 150. 677.82 848 15.638.48
PRIVATE ENTRIES	1932	200. 200. 200. 200. 200. 1,001.90 19,752.36 1,057.14 2,127.85 200. 159.64 8,816.08 80. 159.64 80. 169.64 81.816.08 80. 169.64 81.816.08 81.816.08 81.816.08 81.816.08 81.816.08 81.816.08 81.816.08 81.816.08 81.816.08 81.816.08 81.816.08 81.816.08 81.816.08 81.816.08 81.816.08 81.816.08 81.816.08
PR	1981	4.283.92 160.99 160.99 1,720 200 200 200 200 200 200 200 200 200
	Prior to 1981	23.904.32 11,120.007 11,126.27 4,037.20 113,026.41 113,026.41 113,026.41 113,026.41 113,026.41 113,026.41 113,026.41 113,026.41 113,026.41 113,026.41 113,026.41 113,026.41 113,026.41 113,026.41 113,026.41 113,026.41 113,039 113,03
	County	Adams Adams Adams Baycheld Baycheld Baycheld Chippews Chippews Collark Door Douglas Douglas Douglas Lincoln Marchon Ma

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Part III—Section 6 STATE PARKS

WISCONSIN STATE PARKS

		-		N.	4 3 3 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	How	How Reached
Name of Park	Location	(Acres)	Acquired	rear Estab.	Address of Fark Superintendent	Highway	Railroad
Interstate	Polk	580	Purchase	1900	St. Croix Falls	35, 8, 87	Soo N Design
Peningula. Devil's Lake. Custing Memorial	Door Sauk	3,400 1,400	Purchase Purchase	1910 1911	Fish Creek Baraboo *Delefield	42 12, 113, 159	G. B. & W. C. & N. W. M. St. P. & P.
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	GrantTrempealeau	1.671		1917 1918	Wyalusing *Trempealeau	35, 60, 18 167	Burlington C. & N. W.
Pattison. Tower Hill First Capitol Bith Capitol	DouglasIowa	280 280 280 280	####	1920 1922 1924 1927	Brule Spring Green *Belmont *Wansau	35 11 118, 80 51, 29	Soo C. R. St. P. & P. C. & N. W. C. & N. W.
Potawatomi Terry Andrae	Door Sheboygan	1.046	Purchase Gift	1928	Fish Creek Sheboygan		C. M. St. P. & P. G. B. & W. C. & N. W.
Copper Falls Merick	Ashland Buffalo	291	rurenase Gift	1982	*Fountain City	35, 95	Soo C. & N. W. Burlington

* No resident park superintendent

Part III—Section 7

FISHERIES PRODUCTION OF FISH BY HATCHERIES

	1981 Total Species	l pecies	Total Fiah Production		1982 Total Species	Total Fish Production
Bayfield Brook trout fingerling Brown trout fingerling Rainbow trout fingerling Lake trout fingerling Lake trout fingerling	1,988 690 690 7,226,000 60,000	1,988,000 690,000 7,285,000	000 (898) 6	2,265,000 170,000	1,255,000 1,079,000 89,600 2,485,000	4,858,600
Birchwood Perch fingerling Walt-cycle plice fry Walt-cycle plice fingerling.	12,600,000 1,260 1,260	1,640	12,602,890			
Brule Brook trout fingerling					200,000	200,000
	273.660 300 16.875.900 32.025.900	3,550	49,178,872		167,900 10,000,000 46,800,000	66,987,900
Delaneld Black base fingerling Black base yearling	86,225 348 348	86,573		114.700	114,944	
Perch fry Roach fuller Roach adult Wall-eyed pike fry	11,400.000	000.8	42,797,828	16,850 800	10,000,000 16,650 36,225,000	46,856,594
© Engle River Wall-eyed pike fry	89,150,000	0,000	89,150,000		54,600,000	54,600,000
Esu Claire Brook trout fingerling. Brown trout fingerling	::	485,200 284,400	769,600		849.200 157,000	1,006,200
Haugen Wall-eyed pike fry	19,950,000	0.000	19,960,000		84,650,000	84,650,000

Hayward Bases ingerling Brook treast Russeline	49.050			44 100	
Brown trout fingerling. Rainbow trout fingerling. Wall-eyed pike fry.	82,550,000	82,599,060		62,111 62,111 10,675 108,200,000	103,386,886
Hebron Wall-eyed pike fry Perch fry	42,000,000	48,825,000			
Madison Brook trout yearling Brown trout ingerling Brown trout dult Brown trout searling Brown trout yearling Rainbow trout geneling Rainbow trout yearling Rainbow trout yearling	1,200 171,630 52,200	225,080	604,000 120 400 42,000 60 612	604,520	2649'9892
Osceola Brook trout fingerling Brook trout satiling Brook trout satiling Brook trout fingerling Brown trout fingerling Rainbow trout fingerling	629,200 60,000	689,200	900,000	940,000 100,000 400,000	1,440,000
St. Croix Falls Brook trout fingerling Brook trout variing Brown trout fingerling Rainbow trout fingerling	1,066,168	1,075,168	1,009,200	1,020,200	1,470,200
Sheboygan Lake trout fry	11,200,000	11,200,000		7,500,000	7,500,000
Sparta Brook trout fingerling Brown trout fingerling	323,000 69,100	392,100		310,200 33,400	343,600
Spooner Wall-eyed pike fry	24.675,000	24,675,000		28,950,000	28,950,000
Sturgeon Bay Late trout fry Walleyed pike fry Whitefiah fry	14,280,000 8,722,000 7,200,000	80,202,000		8,100,000 18,125,000	21,225,000

PRODUCTION OF FISH BY HATCHERIES-Continued

	1931 Total Species	Total Fish Production		1932 Total Species	Total Fish Production
Westfield Brook trout fingerling Brook trout yearling Brown trout fingerling	847,425 69,198 258,000	664,618	1,252,136	1,270,261	1,550,261
Wild Rose Brook trout fingerling Brook trout sdult Brown trout fingerling	150,000 7,000 429,750		64,500	64.500	
Brown trout yearling Brown trout adult Rainbow trout fingerling Rainbow trout yearling Rainbow trout yearling	100 429,850 525 11,005 11,530	0 598.380	200 355 242,000 2,000	790,966	1,099.455
Woodruff Black bass fry Black bass figerling. Black bass didt: Muskellunge fry Muskellunge fry Perch adult Pickerel fry Walleyed pike fry	217,000 66,000 283,500 1,620,000 294 294 2860 300,000 49,875,000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	205,400 1,620,000	205.400 1.620.294 420.000 55.650,000	57,895,694
Mississippi river flah Missellaneous flah	25,470	0 25.470		144.090	144,090
Green Bay and northern Lakes rescue operations Black bass fingerling Muskellunge fingerling Perch fingerling Perch adult Plekerel fingerling	1,841			298.869 79 578.122 8.421 11.298	
White bass	14,418	8 87,156		1,000	963,176
		377,746,495			425, 194, 348

FISH DISTRIBUTION BY SPECIES 1931

County	Wall-eyed Pike	Pickerel	Muskel- lunge	Perop	Black Base	Brook	Brown Trout	Lake Trout	Rainbow Trout	Bluegills	Roseh	Misc. Pan Fish	Total
Adama.	685,300		050	10	1.835	32,340	90					385	719,870
Barron	11,131,475		5			211.400	88					991	11.347.704
Bayfield	4.578.760		25			272,430		7,226,250				28. 28.00	12,135,375
Buffalo	396,300					16.750	41,600						454.650
Burnett	3.327,500		-			58,100			:			:	3.385,600
Calumet	066 009 6			99.5		076 261	13,050						18.650
Clark	1 803 455				2 150	117 180				1 600			1 924 385
Columbia	3.396.100				2,500	44.440	48.800						3,496,840
Crawford.	486.240		-				23 000						509.240
Dane	9,238,560			36,860	12.785	320	206.260		13.400			67	9,508,252
Door	7 956 500		-		970	000 6	49.765	91 400 000	:				2 261 940
Dengles	900		:		CCC	36. 70		000,004,12		:		366 0	20,021
Dunn	718,000		-	77.6	027	220.19						0.000	•
Eau Claire	2,725,265					180 140	90 000		16.080				2.981.485
Florence	1,214,850					111 750							1,326,600
Fond du Lac	2,437,280			200	11.600	2.000	39,300						2,495,680
Forest	1,732,775	-	-			199,600	-			-			1,932,375
Grant	364,680	-	-			-	117.200		4 .020				
Green	1,094,040	-	-		:	099	25.560		2.650				1,122,910
Green Lake	2,335,480	-	-	<u> </u>		15,818	8.450	43.750					2,403,498
Iowa	9 994 777		42 906		13 000	149 060	- Deg. 171						2 492 151
Jackson	202		200		3	907	-			:		:	1002 100
Jefferson	5.975,700			1,575,000	7.050		23.528						7 .581 .278
Juneau	498 400			-		34,200	25.860						558,460
Kenosha	3,223,070			2,325,000	37.250		-						5,585,320
Kewaunee.	863,500	-	-	-		.800	-						868,300
La Crosse.		-	-	-		15.800	-						15,800
Lafayette	1.276.380	-		-	-	201 710	14,950				•		1,291,330
Lincoln	2 427 200	32 300	24	-	20 500	87.550				-			2 567 592
Manitowoc			1	7.200	1 900	-	36.570						45,670
Marathon	5,110,085		-		900	131,600	-						5,245,685
Marinette	5.592.550	_	43,240	-	3,250	169,420	20.000	-	-	_	_	-	5,828,460

FISH DISTRIBUTION BY SPECIES—Continued 1931

28 (88)
7 250
6
7.5000
6.4 8.8
40 050
16.50
3
24.000
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13,50
88
S .
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8
A05 110

*Includes 7,200,000 whitefish.

FISH DISTRIBUTION BY SPECIES 1982

	LIRE	L JOHNSON	a Binni	300	T. Market	1100		2001					
1	100					101							613
Appland	5 148 690		179 000		7,000	268.900	82.940						5.676
Arron	15.227.430				8	190.040	10.850		42.640			25.25	15.47
Bayfield	8				8	259.875	212.679	2,266,000	100.275				90.0
Brown	519				8	20,610			9.250				9
Buffalo						900.89	27.75						200
Barnett	3.662.180				200	27.040			119.500			244	5
Cahumet				900	8		14.086		:			3	2
hinner	18 088 250				.300	260.730						3	8
440	2				.500							020	922
Columbia	1 950 570				2,800		009					906.61	2 2
- Constitution of the cons							62.524						62
	A 249 100			116 7	200		111 250		2.198		- - - - - - -	-	6.467
D. J.				•	8		202				06		253
Today	8				3	:	15.219	60.00					19
Door	200.000				12 700	9KA 900	97	3	200				13.867
Jouglas	Š				3	200	25		-				988
Dunn.	060,216			000	967	200	38		-			1 778	140
Eau Claire	007, 700.	25.11		707	2	10 20 A	200						435
Florence	1.310.976			602	86	36.65	267 67					4.915	2
ond du Lee	0/2,0/4,2			DO: 01	38	198 548			26 100	:			88
Forest	209.002				3.	100.00	100 749		30.874				3.586
Clant	#10. 150. 0		-		90		83						378
Green Tales	270.040		-		}	38 300	62.918						921,363
Tree Lake	120 294	-			9		112 508						22
OWA.	2 OKK 071		71 619		10 360	100 500						16,950	4 .
Labor	1,00,000,0				2	93 202						900,9	8
Jefferson	9 857 780			5 003 150	4 225		17.385				.500		2
Junean					9	31,310	64.782					280	6
Kenosha				5 000 000	13,750		2.675		:				90,78
Kewanner	3 259 500						45,936						3
A Crosse						56,640	90					9,750	8
Lafavette	278.648				1,200		67,054						£
Anglade	11 974 260	72 432			-	119.140	_						3:
Lincoln	2 391 565	28 964	44 800		22 045	43.975	-		86,520				7.017
Maniforno	1 248 485	-	:	3 000	8		37 070					11.325	30
Monthon	3 163 166	-	69 650	-	2	309 010	900		2.000	_		-	3,553

FISH DISTRIBUTION BY SPECIES—Continued 1932

Misc. Pan Fish Total	600 1,416,425	222	39,539 34,669,588	· ·	1,822,470	250 8,282,173 6,660 121,060	288.57	35,100 463,568 3,227 79,452,631 0,623,903	2	1,500 110,992 47,306,719 5,025,240	4,020 15,315,960 11,085 7,583,296 22,906,747	2,010,328 3,892,861 12,288 1,016,190	016 101 301 010
Roach										1 500	10,500		16 660
Bluegille													
Rainbow Trout	2,000	31,000	51,060	36,750	39.160	100	49,600 208,060	000 06	8,700		4 ,850	10,900 57,680 28,850	1 996 447
Lake Trout	900	000'0/1							7,500,000				10 00 01
Brown	94,650	41,948	8 932	38.680 48.300	36,540	7,3 6 0 109,112	32,100	107 ,640	113.000	109.492	31,156 55,060	222 404 399 565 12 288	990 901 6
Brook Trout	225.520 193.475	137,100	152,000	18.150 22.650	135 .510	5,278	118,368	28 28 8 8 8	25.00	145,700	127,060	242,066 201,060	E 070 461
Black Base	3,200	900.9	368,083	\$	15.570	19,800	900' 6	21,200	15.200 2.800	70,675	26,150 61,269	. 50 . 50 . 50 . 50 . 50	770 110
Perch			467.840					70,000	3,000		4,406,500 5,601,060	10,000	00 E04 E10
Muskel- lunge			868,809					23		653,350			1 490 979
Pickerel			43,514					67 098	57,928	130,338		78.964	481 900
Wall-eyed Pike	2,319,674	69 .063 698 .115	82,989,714	022	3 132 624	8,254,673	2.719.440	70,268,241	2.888.770 820.145	46,306,656	3.106.906 17.179.308		973 900 918
County	Marinette Marquette	Monroe Oconto	Oneida Outagamie Omnices	Pepin Pierce D. I.	Portage Price	Racine Richland	Rusk Busk St. Croix	Sauk. Sawyer Shamond	Sheboygan Taylor	rempeates Vernon Vilae Walworth	Washburn Washington Wankesha	Waupaca. Wanabara Winnebago Wood	Total

DISTRIBUTION OF FISH BY SPECIES AND SIZE

Species and Size	19	81	19	82
Species and Size	Distribution by species	Total Distribution	Distribution by species	Total Distribution
Wall-eyed pike fry	292,822,000 1,250	292,828,250	873,200,000 218	878,200,218
Black bass fry Black bass fingerling Black bass yearling Black bass adults	l 848		478,000 244	
Black bass misc	1,841	695,119	293,869	772,118
Muskellunge fry	1,620,000 294 22	1,620,316	1,620,000 878	1.620.878
Perch fry Perch fingerling Perch adult	85,100,000 72,585 2,850	85,175,885	20,000,000 578,122 8,421	20,586,548
Pickerel fry	800.000	800,000	420,000 11,298	481,298
Roach fingerling	8,000	8,000	16,850 800	16,650
Brook trout fingerling Brook trout yearling Brook trout adult	4,957,350 91,881 7,700	5,056,381	5,904,886 69,125	5,978,461
Brown trout fingerling Brook trout yearling Brook trout adult	lii	1,971,980	8,105,911 600 475	8,106,986
Rainbow trout fingerling Rainbow trout yearling Rainbow trout adult	525	68,730	1,284,275 60 2,112	1,286,447
Bluegills fingerling	82,750 800	88,050		
Whitefish fry	7,200,000	7,200,000		
White bass misc.			1,000	1,000
Lake trout fry	82,705,000 60,000	82,765,000	17,865,000 170,000	18,085,000
Miscellaneous fish	89,284	39,284	214,259	214,259
	·	877,746,495		425,194,848

BROOK, BROWN, RAINBOW TROUT DISTRIBUTED TO REARING PONDS

		1981			1982	
Location	Brook	Brown	Rainbow	Brook	Brown	Rainbow
Altoona	80,000			80,000		
Argyle		5,000 4,000			6,000	
Barneveld		4,000			5.000	
Barron	20,000			20,000	0,000	
Beloit		4,000	4,000	20,000		
Blue River					12,000	
Bowler	15,000					
Chippewa Falls	7,500			25,000		
Crandon	17,000			17,500		
Crivits	10,000	18,000			 -	
Eagle River	10,000	0,000		12,500		
Eau Claire	80,000	80,000		80,000	10,000	
Eden		8,000			8,000	
Fall Creek	15,000	10,000		15,000		
Gresham	5,000			5,000		
Hortonville						15,000
Ţola	10,000	8,000		10,000	8,000	
Juda		9,000				
Jump River La Farge		8,000 5,000			8.000	
Ladysmith	15.000	3,000		20,000	8,000	
Lancaster	2,000	8,000	2.000	1 '	6,000	15.000
Laona	18,600		2,000	17,500	1	10,000
Lime Ridge		15,000			17,000	
Manawa					80,000	
Menomonie	27,000			25,000		
Mondovi				25,000		
Monroe		14,000		10,000		
Monticello Neshkoro		2,000	2,000		20,000 14,000	
Pembine	4.000	2,000		10.000	14,000	
Pine River	1,000			10,000	16.000	
Platteville		15,000	10,000		25,000	12,000
Plymouth	15,000	10,000		15,000		
Portage	15,000			15,000		
Poynette		4,000				
Red Granite		15,000			16,000	
Reedsburg Richland Center	2,000	2,000 5,000		10,000	7,000	
River Falls		85,000			80,000 80,000	15,000
Saxeville		35,000			8,000	15,000
Stevens Point	10,000				12,000	
Stitzer					7,000	
Tomahawk	10,000			12,500		
Wabeno	8,000					
Waupaca		16,000			28,000	
Wausau	4,000	12,000		56,000	5,000	7,000
Wautoma	28,000	40,000		10.000	82,000	
Wisconsin Dells				10,000	8.000	
W OHEWOC					8,000	
Total	318,100	808,000	18,000	891,000	368,000	64,000

ADULT TROUT DISTRIBUTION

. .		1981			1982	
County	Brook	Brown	Rainbow	Brook	Brown	Rainbow
Adams	5,640			1,800		
Barron	0,040			900		
Burnett	400					
Columbia	9,120			1,800		
Dane	320	-				48
Douglas	2,000			8,400		
lorence				2,600		
orest				8,840		
ond du Lac					200	<u>-</u>
rant	<u>-</u>					2-
reen	660				60	
reen Lake	2,868			1,200		
owa	220					
ackson	1,250			2,400 400	400	
a Crosse	8.180			4.000	1 400	
angiadeincoin	1.850			8.400		
Incoin	2.000			2.560		
	4.000			14,400		2,00
farinette	14,742			6,125		2,00
larquette	750			400		
a onroe	2.164			3,400		
ierce	1.500			900		
olk	4,288			300		
ortage	5.940			1,200		
Carine	0,040		525	1,200		10
Ruak			020	8,600		
t. Croix	4.270			1.800		
hawano	2,000			1 -,000		
ilas	2.000			8,000		
Vaukesha	2,000	30		0,000	60	
Waupaca	2,875	30		1,200	l	1
Waushara	22,444	100*	11.005*	8,600	355	
Wood	2,400		1	1,200	1	
						l
Total	98,881	130	11,530	69,125	1.075	2.17

 $^{^{*}}$ 1981 distribution includes 100 two, three, four year old brown trout and 10,000 two, three; four year old rainbow trout superfluous breeding stock.

REPORT OF FISHWAY AT REST LAKE DAM-1931

Date	Pike	Bass	Suckers	Lawyers	Muskies	Sunfish
May 19	33 14 14 13 9 4 9 26 29 16 17 16	21 13 7 8 1 1 11 3 12 10 10	63 82 83 82 8 8 28 28 40 20 5	1 1 1	4 8 8 8 1	
June 1	21 14 Trap spru	11 7 ng a leak 6	8 10		i	
4	11 11 15 9 10 10 2 6 10 28 11 9 8 8	1 14 1	16 16 8 6 2 2 6 6 28 25 26 20 18 22 21		4 1 1	8
Total	899	178	552	6	82	19
Grand total						1,181

REPORT OF FISHWAY AT REST LAKE DAM-1932

Date	Pike	Suck- ers	Perch	Musk- ie	Law- yer	Cis- cos	Rock- bass	Blue- gill	Crap- pie
A 11 (0.1	_								
April 21	6					1 2			
	•	1				1			
24		1			1				
25	2 8 8				i				
26	9				•				
27	4				1	1			
28	ī								
29	5					i			
80	25				2				
May 1	54		5					1	l
2	51	2	1					1	
8	24	2	8						
4	14	4	2						
5	10	18	5	1					
6	9	8	15						
7	4	18	4						
8	18	11	1		1				
_9	10	18	6						
10	8	6	2						
11 12	.6	17	4 8				1		
	17	6	8		1				1
	9 11	28 50			1		8		
14	15	111	8	1	1		8		
***************************************	17	101	5	1			5		
16 17	14	118	1 2	1			2		
18	28	168	•				ī		
19	20	180	1	- <i></i>					
20	18	188	1 1		i				
21	22	809			2				
22	19	70			-		10		
28	18	40					5		
24	26	19		i	1		8		i
25	-9	14		•	1 *		7		•
26	7	1 1					4		1
27	16	1 7		-			4		1
28	-8	l ī	l	l	1	l	l	l	1
29	18	1 <u>8</u>							4
80	16	I 4	1			1	5		1
81	7	l		l			Ĭ	l	
		-		I					
Totals	550	1,398	67	4	18	1 6	59	1 2	7

Totals all kinds 2.106

WISCONSIN CONSERVATION COMMISSION

RECORD OF FISH PASSING THROUGH LOCK IN PRAIRIE DU SAC DAM USED AS FISHWAY 1932

- 1	2833256444882333355 11	749	123 123 123 123 123 123 123 123 123 123
Total		7	81.0515555555
Sun- fash			
Suck- er	9 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	જ	35 25 2 2 2 3 3 3 3 3 3 4 3 5 5 5 5 5 5 5 5 5 5 5 5
Stur- geon			<u> </u>
Skip psck	22 - 22	88	884-14874EEE
Silver		6	58827 0 1 1 2 2 2 3 8 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Rock Bases			
Pike	3482288	419	4284788444858 ₀ 43
Perch	044 0-0	10	
Ger- man Br. Trout		-	-0 -00-
P. P. P. P. P. P. P. P. P. P. P. P. P. P			
Q di			
Cras pie		æ	000 0000000000000000000000000000000000
Ciaco			g ∞ ≠ ∞
Cast the day	\$28.82 e2	171	525 82888888888888888888888888888888888
Carp	40	9	1 -00 484
Bull-	Ø	2	9 11 91 81 41
Buf- falo			
Brook			
Bluegills		8	
Black Base			
Date	A 1111 1111 1111 1111 1111 1111 1111 1	Total	May 120 120 120 120 120 120 120 120 120 120

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152 238 238 227 227 227 139 139 138 138 138 279 270 270 270	5,838	6.587
88	+	*
ω -ω- + + +	461	511
	9	80
	806	886
**************************************	1,063	1,072
	2	7
822333333888888888	1,532	1,951
	-	20
	11	12
	-	-
2	7	7
288448882424084855	491	524
30 AO	47	47
88325 888888828	882	1,100
2222222	197	203
- A-W	26	61
w 010- 0400	ន	ន
	2	63
	2	99
w- 004040	8	90
38888888888888888888888888888888888888	Total.	Grand total.

Note: From May 26 on, the gates in the lock were only open one foot indicating that the width of aperture does not lessen the number of fish which find the opening.

* Rainbow trout.

STATE ROUGH FISHING OPERATIONS IN NORTHERN **WATERS-1931**

Name of Lake	County	No. of Suckers	Weight
Island	Vilas	2.947	9.102
Butternut	Forest	6.322	18,966
Nokomis		574	1.492
Black Oak	Langlade	4.765	8.673
Metonga	Forest	58,875	80,812
Anvil	Vilas	9.581	29,564
Crystal		4.496	6.945
Seven Mile	Oneida	6.582	18,064
Little Arbor Vitae	Vilas	408	1,030
Carpenter		1.685	5.508
Minocqua	Oneida	480	937
Big Arbor Vitae	Vilas	18.528	51.624
Tomahawk	Oneida	1.949	6.203
Spirit		2.785	11.940
Rice		1.575	17,925
Noquebay	Marinette	8.949	28.042
Clear	Oneida	8.500	10.500
Sweeney		11.189	85.567
Catfish		2.804	4.564
Vieux Desert		281	1.015
Three Lakes Chain	Oneida	7,297	16,144
Tomahawk River	Oneida	1,850	8,110
Total	<u>.</u>	151.322	367.722

Note: In addition there were 2,616 garfish taken from Island lake and 45 taken from Long lake. These weighed 8,509 pounds. There were 9,939 dogfish weighing 29,817 pounds and 863 redhorse weighing 2,589 pounds taken from Island lake.

All edible rough fish removed by department efforts under legislative direction are distributed to needy people who call for them. Inedible fish are destroyed. The work is done in April, May and June.

Due to lack of funds, the removal of rough fish from northern waters was restricted in 1932, only 30,945 suckers weighing 92,835 pounds being taken from Sweeney lake in Oneida county, and 67 suckers and 115 redhorse weighing 345 pounds being taken from Mercer lake.

Part III—Section 8

DISTRIBUTION OF RING-NECKED PHEASANT EGGS

	1929*		1980			1981			1982	
County	No.	No.	Hatch.	Rel.**	No.	Hatch.	Rel.	No.	Hatch.	Rel.
Adams	8:	180	172	140	878	808	212	190	68	4
Appland	33	28	3	2 5	201	9	726	029	200	3 88
Bavfield	28	28	- ·	3 %	100	99	98	200	38	82
Brown	88	1,142	767	288	874	9	294	166	8	3
Buffalo	140	88	23		196	102	179	8	ะล	11
Calumet	20				004	200	147	455	284	202
Chippewa		75	88	16	180	8	56	346	219	2
Clark	28	160	86	8	380	109	80	204	282	177
Columbia	150	029	200	661	632	216	167	220	436	261
Den	690	937	780	103	200	691	82 y	28	33	220
Dodge	28	780	176	52	1,000	976	200	35,	62.	88
Door	120	670	288	257	98	487	888	888	88	173
Douglas	22	15	20	-	99	•	99	8	210	121
Dunn	15	9;	=	6	168	119	36	786	440	298
Eau Claire		15	21	7	<u>\$</u>	8	••	28	888	8
Florence	5	KEL	420	000	300	0.00	000	26	Sign	77.0
Forest	39	92	¥12	022	100	808	292	020	979	29.7 20.7
Grant	116	280	102	3	888	158	112	810	518	276
Green	88	116	28	89	877	174	74	9	350	186
Green Lake	36	240	888	211	299	223	386	169	470	9
Iron	25	38		3	26	200	12	3		
Jackson	8	226	116	82	879	210	149	510	355	244
Jefferson	081	45	22	22	498	66	- 62 -			
Juneau	9.5	292	<u>1</u> :	8	442	216	3 5:	222	263	198
Korronnoo	8	35	116	2	2 6	700	200	080	361	90
La Crosse	30	255	111	3 8	368	38	248	850	202	148
Lafayette	126	116	99	3	430	272	165	282	3698	208
Langlade		22	8	92	292	191	103	410	219	171
Lincoln		38	-		25	616	82.5	140	808	88
Marathon	15	118	- 2	484	9 68 68 68 68 68	208	231	770	247	8 8 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
				í		. ,,,,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			;

DISTRIBUTION OF RING-NECKED PHEASANT EGGS—Continued

a de la constanta de la consta	1929*	_	1980			1981			1932	
Carro	No.	No.	Hatch.	Rel.**	No.	Hatch.	Rel.	No.	Hatch.	Rel.
Marinette	25	828	175	142	212	69	21	240	122	76
Marquette	46	165	106	<u>8</u>	183	ន្តខ្	170	17	8	
Monroe	35	302	181	75	388	892	222	200	804	269 249
Oconto	86	38	ਡ °	93	325	86	∞ ç	315	198	149
Outagemie	2002	8	0	*	222	28.8	88	1.675	888	212
Oznukee		145	41	98	200	47	8	180	601	8
Pepin	010	200	2000	001	200	2 3	611	921	3	22
Polk	130	220	31	202	200	181	119	382	217	i 8
Portage	9	116	22	2	595	142	38	120	19	3
Price	2	15	===	œ ;	171	28	.	242	83	105
Racine.	35	355	253	5	865	296	3.5	853	180	115
Rock	250	1.135	617	240	1.085	212	24.0	268	516	380
Rusk	27	8	ន	9	2	8	98			3
St. Croix.		149	នះ	71	430	288	35	26.	3	ន
Sauk	25	145	16	RG C	0320	28	2 2	165	34	3 8
Shawano	15	202	129	80	410	188	162	220	331	257
Sheboygan		968	176	22	465	253	148	670	396	3
Taylor	32	35	ละ	25	38	7.0	22.5	88	43	3 25
Vernon	88	38	88	9	427	288	121	32	38	
Vilae	10	10	12	80	135	84	3	360	194	140
Walworth	2;	220	825	107	096	3 0	202	25.	410	569
Washington	2	25	148	190	492	808	1.0	35	9	2
Waukesha	20	150	28	88	38	200	143	200	354	236
Waupaca	75	230	808	215	086	869	527	1,250	598	898
Waushara	85	180	\$ 2	88	200	25.5	7.42	870	199	200
Wood	3	16	, ec		279	215	916	100	201	707
Total	5,840	16,330	8,551	6,600	26,773	14.499	9.536	29.542	13,963	9,126
	_				-		-			

* 1929 was first year of major distribution. Co-operative hatching and rearing figures were not compiled.

*** Selement
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BIENNIAL REPORT

WISCONSIN WILD LIFE REFUGES

	Name	County	Acres
_	ake Owen Wild Life Refuge	Bayfield	1,08
ö	neide Golf and Riding Club	Brown	1,00
č	neida Golf and Riding Club ranton Legion Wild Life Refuge	Clark	64
ĕ	toohe's Reserve	Clark Crawford	22
ະ	toehr's Reserve. ernon Valley Refuge ake Wingra Refuge niversity Bay Wild Life Refuge oxhall Wild Life Refuge	Dane.	1,61
ř	ake Wingra Refuge	Dane	1,52
ī	niversity Ray Wild Life Refuge	Dane	40
ř	orball Wild Life Defuse	Dane	28
ŕ	larker Wild Life Refuge fendota S:ate & Memorial Hospital fcDonald Wild Life Refuge	Dane	49
ì	Condote State & Mamorial Hospital	Dane	58
ä	faDonald Wild Life Defuge	Dodge	82
ř	lote Dofues	Door	2,20
ī	otz Refuge amarack Farm andail Wild Life Refuge amp Byron Wild Life Refuge	Dougles	8,84
i	endell Wild Life Refuge	Douglas Fond du Lac	2,24
r	amp Ryron Wild Life Refuge	Fond du Lac	97
	uell Acres	Jefferson	81
	eterson Wild Life Refuge	Juneau	16
	Prov Cun Club Refuse	Juneau	2,48
i	lroy Gun Club Refuge	Kewaunee	1,69
1	nela Tac's Wild I ifa Dafura	Kewaunee	1,46
,	ncle Joe's Wild Life Refuge	Lafayette	97
į	reftwood Defuse	Langiade	28
í	raftwood Refuge	Manitowoc	52 52
١	Ianitowoc Co. Fish & Game Assn.	Manitowoc	52
٠		Manitowoc	78
	No. 2	Marathon	81
i	Iosinee Refuge	Marathon	37
	liver Cliff Defuse	Marinette	20
į	liver Cliff Refuge Thite Rapids Wild Life Refuge	Marinette	2,1
	allow Parm Doluge	Monroe.	84
	alley Farm Refuge forgan Wild Life Refuge	Oconto	68
	rchibald Wild Life Refuge	Oconto	3,4
		Oneida	10
	erndale Piace llington Wild Life Refuge	Outermin	1,6
	forthe Bond Come Construction	Outagamie	1,0
	fartha Boyd Game Sanctuaryoot River Wild Life Refuge	Racine	1,1
	vercrest Refuge	Rock	1,1
į	t. Croix Reserve No. 1	ROCK	82
	Vilson Came Defuse	St. Croix St. Croix and Dunn	1,2
	Vilson Game Refuge Iarquardt Wild Life Refuge	Shawano	50
į	eneca Wild Life Refuge	Shawano	32
ί	eneca Wild Life Refuge	Shawano	1,08
í	orest Preserve Refuge	Sheboygan	2 10
k	ohler Game Refuge	Sheboygan	2,20
ä	igeon River Wild Life Refuge	Shebovgan	1,26
١	orth Branch Wild Life Refuse	Sheboygan	1,42
	onstance Lake Reserve uter Rapids Wild Life Refuge orest Lake Wild Life Refuge	Vilas	1,17
	uter Rapids Wild Life Refuge	Vilas	2
Ē	orest Lake Wild Life Refuge	Vilas	1,16
ı.	akedale Kaserve	Washburn	- 19
Ź	amp Minikani Wild Life Refuge	Washington	18
j	amp Minikani Wild Life Refuge Vashington Co. Wild Life Refuge	Washington	
	ed Brae Farms	Waukesha	1,44 50
١	ew Hope Iola Wild Life Refuge	Waupaca and Portage	88
	W. L. Chain O'Lakes Chapter		-
	No. 200	Waupaca and Portage	1,10
3	pringvale Wild Life Refuge	Waupaca	1,08
١	orthern Hospital Wild Life Refuge	Winnebago	65
ì	inchester Wild Life Refuge	Winnebago	80
ľ	rinchester Wild Life Refugeri-City Wild Life Refuge	Wood	8,50
٠	ake Biron Wild Life Refuge	Wood	1,65
į	avfield County	Bayfield	68
į	oricon Marsh	Dodge	40,00
L	ouglas County	Douglas	24,96
F	orest County	Forest	46,08
B	orest Countylack Hawk Refuge	Green Lake	4
۰	anglade County	Langlade	10,88
	incoln County	Lincoln	7,68
ĭ	Sarinette County	Lincoln Marinette	8,08
i	farinette County	Oneida	1,60
ŕ	lear-Crooked Lake Game Refuge	Vilas	8,00
ĭ	rout Lake Game Refuse	Vilas	89,60
i	rout Lake Game Refugeouth Bluff Game Refuge	Wood	2,56
	opper Falls State Park	Ashland	2,50
'	ferrick State Park	Buffalo	2
-		~ · · · · · · · · · · · · · · · · · · ·	-

WISCONSIN WILD LIFE REFUGES—Continued

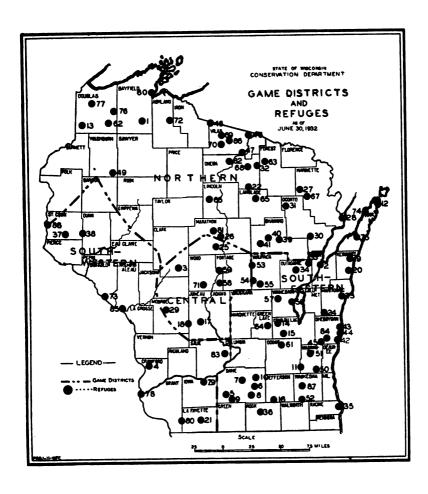
	Name	County	Acres
74.	Peninsula State Park	Door	3,40
75.	Potawatomi State Park	Door	
76.	Brule State Forest	Douglas	
77.	Pattison State Park	Douglas	
78.	Nelson Dewey State Park	Grant	
79.	Tower Hill State Park	Iowa	
BO.	First Capitol State Park	Lafavette	.1
31.	Rib Mountain State Park	Marathon	
32.	American Legion State Forest	Oneida	36.00
38.	Devil's Lake State Park	Sauk	1.40
34.	Terry Andrae State Park	Sheboygan	
35.	Perrot State Park	Trempealeau	950
B6.	Northern State Forest	Vilas	125.00
B7.	Cushing Memorial State Park	Waukesha	
88.	Interstate Park	Polk	
	Total		469.69

Note: Nos. 1 to 59—Private wild life refuges. Nos. 60 to 71—State wild life refuges. Nos. 72 to 88—State parks and forests.

In addition to the refuges listed above there are three waterfowl refuges—the Delta Fish and Fur Farm Refuge in Trempealeau county, established by legislative act in 1931; the Puckaway Lake Refuge in Green Lake county; and the Moon Lake Waterfowl Refuge in Fond du Lac county, established by commission action.

commission action.

In addition to officially established wild life refuges, there are approximately 200,000 acres contained within privately established wild life refuges and sanctuaries.



GAME CENSUS TABULATION—1931

Cottontail rabbit	1.075.591
Snowshoe rabbit	437,183
Jack rabbit	17,956
Gray Squirrel	303.674
Fox Squirrel	149.772
Black squirrel	1.944
Red squirrel	70.204
Ruffed grouse	38.885
Ruffed grouse Prairie chicken and sharp-tailed grouse	36.453
Rails	3.703
Jacksnipe	28.686
Mallard	57.217
Black duck	5.740
Green winged teal	23.845
Blue winged teal	21.623
Pintail.	9.746
Coot	132.337
Cadwall	715
Gadwall	2.947
Shoveler	4.342
Widgeon	11.129
Canvasback	4.223
	19.726
Greater bluebill	
Leeser bluebill	15,505
Ring-neck duck	989
Bufflehead	897
Ruddy	1,552
Goldeneye	1.040
Merganser	2,702
Any other duck	2.285
Canada goose	332
Any other goose	423
All other small game	49,828
Bobcat	157
Red fox	914
Gray fox	1,814
Raccoon	7,675
Opossum	2.191
<u>-</u>	

2,545,895

Total Reports 121,209

The game census law was passed by the 1931 legislature and report blanks were issued with each hunting license in 1931. Reports of the 1931 kill were tabulated in 1932.

TRAPPING STATISTICS Average Value per Pelt

Animal	1927	1928	1929	1980	1931
Munkrat	\$1.62	\$1.42	\$.89	\$.51	\$.56
Mink	8.58	10.40	8.57	4.98	8.84
Raccoon	6.62	7.35	7.36	4.99	8.94
Skunk	2.19	2.59	1.98	1.84	1.16
Weasel	1.40	1.11	.64	.45	.38
Fox	9.98	11.28	8.88	5.84	2.76
Wolf	11.55	11.98	7.07	5.04	3.59
Badger	5.06	7.38	5.25	5.61	3.86
Otter	29.19	21.51	28.69	15.21	9.82
Opossum.	1.05	1.06	79	.54	.85
Rabbit	1.08	.11	.04	.04	
Squirrel	.18	.10	.02	.01	
T		.10	2.78	2.55	
Lynx					
Wildcat.	4.78	8.60	2.88	2.07	1.74
Housecat			.42	.14	

BIENNIAL REPORT

TRAPPING STATISTICS

	118	1927	51	826	19	6261	61	1930	81	1881
Animat	Total Peits	Total Value	Total Pelts	Total Value	Total Pelts	Total Value	Total Pelts	Total Value	Total Pelts	Total Value
Muskrat Mink Mink Mink Raccon Skunk Weasel Fox Wolf Volter Opter Oposum Cyter Oposum Lynx Mildeat Houseat Eublit E	75 910 6 069 8 069 10 380 19 774 524 722 13 13 77 77 77	48.472.59 48.472.59 5.488.68 22.740.07 27.612.93 5.896.57 8.80.67 86.70	120, 596 2, 988 1, 1982 12, 776 17, 740 17, 740 110 110 17, 72 274 116	\$171,897.57 30,566.26 31,216.38 33,181.45 19,661.45 9,727.26 806.79 86.70 76.55 76.55 76.57 76.57 76.57 76.57 76.57 76.57	283 11. 2. 345 2	2008,135,62 101,622,83 17,256,84 27,725,84 18,444,27 17,256,62 446,27 2,446,27 2,446,27 2,446,28 2,446,28 2,446,28 8,50 8,50 8,50 8,50 8,50 8,50 8,50 8,5	23. 6.6394 11.476 113.036 666 666 1124 107 107 107 107 107 107 107 107 107 107	\$13, 153, 153, 153, 153, 153, 153, 153, 1	288 500 11,586 11,586 1,979 28,624 20,558 801 414 170 298	4118 1811 86 44 281 16 44 281 16 28 37 478 88 37 478 88 37 478 88 37 48 49 17 48 47 70 10 669 86 1 669 86 10 669 86
	113,324	\$234,602.94	158,162	\$287,601.24	219,414	\$385,618.25	62,431	\$84,590.31	298, 122	\$217,897.87

Part III—Section 9

	LAW ENFORCEMENT	INDIVIDUAL WARDEN RECORDS—1930–1931
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Warden	District	Cases	Won	Lost	Fines	Jail Sentences (days)	Courts	Seizures		Fees
Alderman, E. L.	Portage	3	4:	4	\$ 1,230.00	210	\$ 247.15		•	92.40
Apel, Edw. Apel, Harold	Menomonie	3 8	42	4 4	700.00	65 240	308.09	8 9		102.76 68.55
Baie, Arthur	Marinette	8	8	6	1,750.00	098	150.65			21.00
Borner I H	Cark Falls	30	21	. 6	82.88	88	22.87			7.12
Bosworth, E. F.	Merrill	17,	17	•	990.06	8	178.96		<u>:</u>	81.15
Button, Percy E.	Mauston	8	ន	-	1,120.00		127.76			68.89
Christonen D	Cankoen Trees	Š	Ŋ	۵	99.99	99	78.19			14.23
Clawson, W. P.	Park Falls. A.	4	4		25.00	30	85.00		!	10.00
Colburn, Roland	Pardeeville						11		:	
Coles, W. A.	Wisconstn Kapida	3	3		810.00	240	150.60			68.75
Curtie, P. S.	Viroqua	10		~	800.00	60	80.08		<u> </u>	9 55
Dahl, H. R.		,-	_		10.00		6.61	_		2.11
Danielson, H. T.	Madison	-	-							
Devine, Barney	Webster	19	12	4	586.00	275	62.98	_		29.80
Devine, Thos.	Spooner	11	11		280.00	420	59.22		_	18.76
Diedrich, Peter	Milwaukee	- 25	9:	۰,	618.88		102.02			45.42
Docknam, F. A.	Baraboo	276	16	⊣ e	3.8	200	64.62			41.77
Edick Toward	Chabouren	5 %	700	4 14	300	3	200.24			11.70
Fran John	Manitowoc	88	32	140	780.00		89.89			5.12
Elliott, W. P.	Whitewater	159	19		2,600.00	8	594.88			280.80
Feet, Edw.	Madison	22	200	4	200.00	16	168.89			29.62
Fisher, F. W.	Oconto	2	8	•	1,160.00	270	187.81			185.00
Foundt, J. B.	Tomahawk.	8	17	9	278.00	269	26.80			19.88
Freund, Henry	Rhinelander	ø,	01		10.00	16	11.92			6.25
Glesen, Louis	Fountain City	17	91	-4-	465.00	210	24.11			36.41
Gray, Robt.	Milton	3	;	4	1,500.00	2.70	411.19			177.08
Hall, A. W.	Darlington	120	=	-	650.00		68.00	81	:	18.75
Hanson, Allen Hanson, J. E.	Ladysmith	\$ -	\$	04 -	288.00	906	120.43			47.90
Happle, Max.	Iron River	19	31	- 0	586.00	670	71.46	47	<u>:</u>	59.40

25.70 25.70	60.76 86.70 30.60 44.54 127.52	248.25 25.25	4.26 15.50 115.50 115.00 102.11 102.12 84.20	16.00 15.85 15.85 15.85 16.10	86.15 69.20
8 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	ల బొత్తా చెక్క	%1 44 5%8%-	8 582 345		:83
122.90 142.45 155.21 65.11 249.87 108.14 18.72 86.11	126.05 175.29 61.37 287.16	6 6 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	25.00 25.00	229.08 143.40 143.40 229.08 24.55	187.95
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	00000000000000000000000000000000000000	82644 8266 8266 8266 8266 8266 8266 8266	60 60 120 450 210	120 120 60 111 410	270 70
250 250 250 250 250 250 250 250 250 250	1,250.00 1,250.00 1,325.00 1,325.00	250.90 480.00 485.00 250.00 1,687.00 25.00 250.00 250.00 250.00 250.00	88888888888888888888888888888888888888	1,235.00 1,235.00 100.00 1,005.00 1,605.00	1,000.00
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			8854 88 888		58
	.88 2 24	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	చెలెలె 42 8 కింతలెన	.425.524	32
Tornah Hammond Hammond Stevens Point Mediord Phillips Appleton Against Phillips Appleton Fish Creeker	Whitehall Abland Fennimore Crandon Antigo	West Bend Lia Crosse Black River Falls Luck Barron Spooner Matien	Spooner Superior Superior Dunbar Forance Florence Three Lakes Argonne Argonne Brile	Wausau Ractine Bayfield Milwaukee Waupaca. Horicon Minocqua	Rhinelander Sturgeon Bay
	Johnson, T. J. Jones, L. D. Krester, J. G. Kirkpatrick, A. B.				

INDIVIDUAL WARDEN RECORDS-1930-1931-Continued

Warden	District	Cases	Won	Lost	Fines	Jail sentences (days)	Costs	Seisures	£
Sempson, Andrew Schwalbe, Otto Scolman, J. T. Scolman, J. T. Smith, Ira G. Spencer, Carl M. Stiglbauer, F. Svighbauer, A. Svighbauer, A. Trighon, Dan Trainor, Dan Trainor, Dan Trainor, Dan Trainor, Dan Wewer, Harry Worden, J. D.	Stoughton Fond th Lac Fond th Lac Green Bay Hayward Oconomowoc Hayward Ochomowoc Prorp Prorp Princeton Wabeno Phillipe	3221128383488878 *	22411388 42 4488773	844 000000000 4	\$1,100.00 \$275.00 \$775.00 \$300.00 \$80.00 \$80.00 \$1,675.00 \$1,105.00 \$1,105.00 \$275.00 \$275.00 \$275.00	30 30 390 390 390 390 390 300 540 600 600 900 900	2277 90 72 40 72 40 72 40 72 40 73 40 185 88 186 98 166 91 84 59 186 91 84 59 186 93 84 70	8 2 2 1 8 8 4 7 1 1 8 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	26 26 26 26 26 26 26 26 26 26 26 26 26 2
Totals		2,212	1,921	290	\$56,783.65	18,309	\$10,112.88	2,184	\$4,006.98

* 2 died before trial

** 1 outcome unknown

INDIVIDUAL WARDEN RECORDS—1931–1932

Sekures Fees	\$ \$14.80 42 96.86 1 96.86 18 76.66 89 68.40 1.00
Costs	886.88 875.71 875.71 875.88 875.88 875.88
Jail sentences (days)	00.00 00
Fines	250.00 250.00 1,125.00 1,00
Lost	Na
Won	84 84 84 84
Case	ත වී කිකු විස
District	Sparta Portage Portage Eau Ciaire Eau Ciaire Marinconie Marinconie Part Palle
Warden	Adamaki, J. F. Aiderman, E. L. Apel, Clarence Apel, Edw. E. Apel, Harold Bales, A. Harold Bales, Chag.

2.00	1.60	200	38.6	88.40	8.85 80 80	4.00	3.40	6.80	4.20	8.43	21.10	46.74		241.85	67.48	9.82	6.25	100	7.00	198.85		19 76	96	36.58	.95	69.00	24.87		28. 8.55.
<u> </u>	<u> </u>	•	-			:	<u> </u>		!				:			_	:	:		!	-	-				:			
445	∃ ~ 4	88.		25	6 -	M	٥ .	ଷ-	٠,	89	78	8	87	23	75	é		69 <u>6</u>	9	82	•	26	3-	92	∞ 5	ផង	&	• 22	129
4.58	41.34	68.17	8.25 9.25	177.72	11.20	9.86	4.68	16.91	7.50	81.24	82.70	226.86	14.52	567.09	59.86	101.08	16.16	9 9	10.0	489.85		66 91	4.95	109.95	19.99	157.84	11.18	2	109.84 77.70
	270 120	270 150		880	စ္တင္တ			361			000	200	150	740	200	870		0.00	150	920	-	90	3	2,550	160	910	120	201	1,200 880
9	82.08	150.00 720.00	30.0	450.00	100.00 810.00		60.00	120.00		225.00	275.00	90.00	150.00	2,015.00	86.09	100.00	30.00	8	20.001	1,700.00	90	220.00		475.00	20.00	1,020.00	90.00	70.00	470.00 50.00
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010	90-	58.	•	72	42	64	-	12	-	-	œ g	325	9	2;	72	12	9		n t-	. 69	c	100	1	80	•	47	21 4	p ,	122
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New Auburn	Park Falls Merrill	Mauston Oshkosh	Park Falls.	Wisconstn Kapids	Viroqua.	Waterloo	Merrillan	Webster	Oostburg	Milwaukee	Baraboo	Sheboygan	Manitowoc	Whitewater	Oconto	Tomahawk	Rhinelander	La Crosse	Each River	Milton	Madison	Darlington	Elton	Ladysmith	Iron Kiver	Eagle River	Park FallsTomah	Madison	HammondStevens Point
Barnes, A. E. Boldon, Aron E.		Button, Percy E. Chase, A. C.	Colburn, Roland	Cole, W. A. Coleman, O. L.	Curtis, P. S. Dahl, H. R.	Dallman, Royce	DeBow, M. M.	Devine, Barney	DeZoute, Jas.	Diedrich, Peter	Dockham, F. A.	Edick, James	Egan, John	Elliott, W. P.	Feet, Edw.	Found, J. B.	Freund, Henry	Frereichs, Julius	Gould Leo J.	Gray, Robt.	Grimmer, Wm. F.	Hall A W	Hall, Clyde R.	Hanson, Allen	Hanson, John E.	Hayner, S. W.	Hayward, Lloyd	Hall Chas.	Hope, Lawrence Hornberg, Frank

INDIVIDUAL WARDEN RECORDS-1931-1932-Continued

Warden	District	Cases	Won	Lost	Fines	Jail sentences	Coerts	Seizures	Fees
N II TOUR	Modford		6		00 0030	750	07 6010		
Hongen H O	Lorette	9	7.5	ou	575.00	280	\$103.45 995.08	15	15.90
Jakonhole K	Philling	8	88	2	675.00	98	200	2	27.7
Jeke Louis	Appleton	3	}-	}	180.00	38	24 98	==	7.80
Johnson, George	Richland Center	12	•	8	250.00	9	88.41	8	26.60
Johnson, T. J.	Whitehall	31	18	10	450.00	210	204.71	တ	72.80
Jonas, J. W.	Spooner	13	12	-	20.00	240	89.17	11	8.9 9
Jones, L. D.	Ashland	63	21	•	210.00	270	19.61	83	16.70
Keeler, J. G	Fennimore	31	24	-	770.00	240	156.40	9	41.20
Keeney, Robt. A.	Wis. Rapids	» (-	20.00		7.85		2.86
King, Alired E.	Merri	7	4:		00 04	2			
Kirkpatrick, A. B.	Crandon	776	16	۰,	36	2 2	22.22	~ ;	11.40
Aramer, Emil	Anugo.		- -	200	90.00	030	02.20	2	30.70
Lake, K. J.	west bend	2;	1:	N 0	96.98	200	28.00	33	81.78
Lange, Limer		5	1	•	3.0	8	10.15	3.	8.6
Lanning, B. F.	Diack Kiver Falis				000			٠,	
ree, Albert	Luck	8.	6.	\$1	200.00	1,035	34.40	٥	12.60
Lemay, Nell	Draper	٠,	- (:		28			
Linn, Ervin	Barron	20	7		3.00	99	93. ×	7;	4.75
Long, Frank	Spooner	33	8	»·	400.00	2.0	64.65	3	23.55
Long, John	Mellen	å,	, ,	-	99.09	000	110.94	77	72.48
McDonald, F. A.	Spooner	• ;	•		200		42.43		9
McKeague, Harley	Knineiander	5	30	4.0	300.00	929	26.47	14	12.70
McNaughton, Jas.	Superior	3°	2,4	»	30.087	261	3.5	8.	28.20
Matysek, Tony	Sayner	"	200	:		2		-	
Menarg, wm.	Lyander	01	0		3.51		20.5		
Mentz, Gilbert.		- (× 0 (*		15	14.50	eo (9.9
Minor, Fred	Iron Kiver	77	9	۰	3	2	27.08	23	8.00
Moeller, Ira J.	Kewaunee	92	18		200.00	120	98.26	6	20.97
Mousberg, F.	Mauston	99	89			စ္တ	7.08	13	93
Mullaney, Hy	Spooner	٠;	9		40.00	180	20.60	•;	9.6
Nixon, R. A.	Morence.	41	80.0	N	200.00	270	114.65	98	89.65
Onbest Louis	Crantaburg.	20	200			000	01.11 048 95	* 60	26
Otto, Chas.	Argonne	58	25	9 65	200.00	200	165.81	300	78.55
Osburn, Wm. A.	Vencebe	2	i				20 00	- 02	25 72

2 died before trial,

10 left country before trial.

BIENNIAL REPORT

84.64 72.48	5.60 4.85	09:1	19.98	96.90	144.26	1.48	38.95	10.70	9.F	8.	96.63	5.23 5.23	28.90	24.80	83.90	40.40	02.30	1.20	9.90		8.8		1.48	6.92	2.60,	11.87		\$3,019.62
21	90	22	2 8	222	98	3-	2	2;	1	6	9		7 2	3=	22	22	ŝ		-				-		18	56		2,111
78.16	6.66	12.00	127.49	132.85	888.00	7.48	88.18	46.80	4 87	7.25	67.21	156.15	100.92	101.21	92.30	114.41	140.64	80	24.11		9.6	20.45	84.7		11.10	47.02		\$8,485.85
490	120	709	210	750	940	150	9	8;	010		80	020	1 575	240	240	570	021	160		281	200	90	80		06	120		30,168
650.00 845.00	50.00	20.00	475.00	850.00	1,925.00	150.00	190.00	150.00	200.00		100.00	10.00	775	775.00	855.00	220.00	80.00	150.00	20.00		150.00	30.00	50.00		150.00	286.00		\$34,053.00
6110	0101	4	v	4	٠.; م	*	9	م	:	1 1			- 0	00	တ	œ ¢	9				30				-	 ,	-	329
827	8001	4	7.	42	8:	3 4	25.	∞;	2≪	,	9	∞ ;	, r	. 24	8	នះ	7	•	13	10	ه د	X) @	0 01	4	4	윊		2,082
88	80 4 -	e oo	\$ 62	14	96	, y	`&	138	<u> </u>	, 	-	∞ [• 0	4	84	42	87	• [-	18	9	13	10 0	0	4	29	22.	1	2,458
Wausau Racine	Bayfield	Waupaca	Horicon	Mercer	Rhinelander	Sturgeon Bay	Stoughton	Fond du Lac	Rice Lake.	Tomahawk	Green Bay	Hayward	Geonomowoc	Shawano	Thorp	Wabeno	Horicon	Wangau	Brule	Two Rivers	Philips	White Lake	Ladvemith	Florence		Plainfield	Elcho	
Perry, Lea M. Peteraon, A. J.	A. W.	Frank	/m.	Be. I. C.	Robinson, A. J.	Cowe, Hallie	Sampson, Andrew	Otto	Scotman, Jas. T.	Small Geo. R.	th, Ira G.	eif	orgioauer, F. A.	TO.	a, H. C.	it, R.	rainor, Dan	T	all, E. J.	Vaskow, B. J.	eaver, Harry	West, Myron	Russel	Winkler, Lester	eve	J. D.	oungnauer, Thos.	

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Note: 85 cases open.

SEIZURES 1930-1931

Article	Number Seized	Number Sold	Proceeds From Sale	Other Disposition
Automobiles*		- 		
Model T. Ford truck (poor)	1	1 1	\$ 15.00	
Nash sedan	1			
(fair) Studebaker	_	1	59.20	I
sedan	1	1 i .	200.00 250.00	:
(poor)	1	1	17.00	
Ford roadster Ford truck	1			Held for fisheries di- vision use
Deer Carcasses	666	612	10,956.75	35 destroyed** 16 held 1 albino to Mil- waukee Museum 2 stolen
Skins	32	16	18.50	15 held 1 destroyed**
Venison Deer heads.	442 lbs.	357 lbs. 2 2	96.80 1.50	85 lbs. destroyed*
Unborn fawns . Live deer	2 15	10	1.00 215.00	3 to game farm 1 returned 1 released
Fish Commercial Game	11,125 lbs. 3.057 lbs.	11,100 lbs. 2,508 lbs.	2,724.09 170.12	25 lbs. unsalable 225 lbs. destroyed**
Rough	13,259 lbs.	13.033 lbs.	119.25	324 lbs. unsalable 195 lbs. given away**
	18 boxes (poor cond.)	18 boxes	50.25	31 lbs. destroyed**
Fishing Equipm't Fish traps. Nets	26 99	3	25.00	26 destroyed** 44 destroyed** 36 held 15 returned 1 to fisheries
Rod and reels Set lines	7 477	2	5.50	division 5 held 384 destroyed***
Snag lines	43			98 held 42 destroyed***
Spears	44			1 held 23 destroyed***
Miscellaneous (including snag- line, hook wgts, dip net poles, throw lines, pound net crib,				21 held
etc.)	69	1 item	5.00	68 destroyed***
Fur Badger Beaver	4 221	15	190.99	4 held 205 held 1 destroyed**
Bobcat . Coyote Ferret	21 34 2			21 held 34 held 2 held***
Fox	40	33	212.96	4 held 3 destroyed**
Mink	82	12	120.86	69 held 1 destroyed**
Muskrat	1,375 skins 5 live	281	315.60 3.00	1 .094 held 3 liberated
Racecon_	41	19	81.50	21 held

SEIZURES 1930-1931-Continued

Article	Number Seized	Number Sold	Proceeds From Sale	Other Disposition
Skunk	119 skins	89	95.50	29 held
Weasel Wolf	38 live 51 7	14	32.00	1 destroyed** 24 liberated 51 held 7 held
Game Bear	9 carcasses 6 skins 3 live	8 4	109.12 26.00	1 held 2 held 2 to game farm 1 to state re-
Beaver	83 live	16	598.88	formatory 13 liberated 2 to game farm 2 to Milw. zoo
Elk	1 carcass 16 carcasses	16	886.54	1 held
(Upland)	61 carcasses	24	15.75	32 held 5 to schools for mounting
Waterfowl	3 live 48 carcasses	8	1.50	3 liberated 38 destroyed** 1 held 6 for scientific
	2 live			purposes 1 to game farm 1 to U. S. Supt. Wild Life
Rabbit Raccoon	50 carcasses 11 carcasses 47 live	40 10 28	7.06 68.50 155.40	Refuge 10 destroyed** 1 destroyed** 6 held, 5 to Fonc du Lac Park 5 liberated, 3 to state reforma.
Squirrel Guns	5 carcasses			5 destroyed**
Pistols	3 110	74	4.05 812.40	1 returned 29 held 7 returned
Shotguns	93	75	671.85	18 held 5 returned
Miscellaneous Batteries Boats	4 16	1 4	3.00 47.50	3 held 10 held 2 returned
Caviar	39		28.00 7.00	2 returned
DogsEagle	4	1	2.00	22 held 8 killed Given to Milw.
Lights	25	5	10.50	Museum 18 held 1 returned 1 destroyed***
Packsack. Sturgeon eggs. Traps. Axes, pails,	1 1½ quarts 1,102	1 1½ quarts 485	.50 1.00 52.11	617 held
blankets, cans, etc	24			23 held 1 destroyed**
Total	33,151	28,984	\$19,481.08	

^{*} Sale price of cars based on Blue Book valuation of second hand cars.
Costs of cases subtracted from gross proceeds.
** Unsalable.
*** Public nuisance.

SEIZURES 1931-1932

Article	Number Seized	Number Sold	Proceeds From Sale	Other Disposition	
Automobiles*			_		
Chevrolet coupe					
(fair)	1 1	1	\$75.00 324.42		
Oldsmobile se-	•	1 *	024.42		
dan	1	1	155.51		
Chevrolet coupe Ford coupe,	1	1	93.37	†	
Model A	1	1	172.75		
Ford coupe, Mod. T(junk)					
Dodge sedan,	1	1	. 5.00		
Model 19	1	1	30.00		
Ford coupe, Model T				1	
(poor)	1	1	10.00]	
Ford sedans	2 1			Returned	
Chevrolet tour. Cadillac coach	1			Held Held	
Chevrolet coach	1		1	Held	
Hudson truck	1			Held	
Ford coupe, Model T	1		1	Held	
Buick coupe	1		1	Held	
Deer					
Carcasses	207	163	2,586.89	25 held	
1		1		5 unsalable 14 destroyed ^{es}	
Venison	1,337 lbs.	858 lbs.	186.48	299 lhs. des-	
	-,			troyed**	
Hides	59	36	89.00	180 lbs. unsalable 19 held	
	03	30	33.00	4 destroyed**	
Heads & horns.	.4	2	4.50	2 held	
Live	19	6	98.50	1 held, 1 to park 1 released, 10 to	
				game farm	
Fish Commercial	21,978 lbs.	21,706 lbs.	2,367.53	257 lbs. unsalable	
				15 lbs. destroyed**	
Game	3,693 lbs.	2,986 lbs.	208.62	420 lbs. unsalable	
				22 pickerel released	
Rough	1,778 lbs.	655 lbs.	9.20	287 lbs. destroyeds 22 pickerel released 1,058 lbs. unsalable	
Fishing Equipm't				65 lbs. destroyed ^{ss}	
Nets	180	3	6.00	42 destroyed*** 54 held, 74 re-	
				54 held, 74 re- turned, 4 to	
				game farm, 1 to	
				fish hatchery.	
				2 U. S. Bur- eau Fisheries	
Rods and reels.	11	7	15.25	3 held	
Set lines	414	1	1.00	1 returned 367 destroyed***	
Set mes	414	•	1.00	46 held	
Snag lines	14			11 destroyed***	
Spears	78			3 held 35 destroyed***	
-				98 held	
Traps	62			56 destroyed*** 6 to game farm	
Miscellaneous				0 00 8444	
(including hooks, net poles					
ice fishing					
frame, etc.)	18			12 destroyed***	
Fur			1	6 items held	
Badger	2	1	.25	1 held	
BeaverBobcat	316 14	1	6.00 4.00	315 held 13 held	
Covote	24	1	00	24 held	
Ferret	10	1	69.00	Given to Museum	
Fox House cat	19 1	*	85.00	15 held 1 held	
	-		7	~ T	

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SEIZURES 1931-1932-Continued

Article	Number Seized	Number Sold	Proceeds From Sale	Other Disposition
		4	28.65	76 held
Mink Muskrat	80 2.267	10	6.25	2.254 held
			i	3 destroyed**
Otter	1			1 held 1 held
Rabbit	24	1	3.00	23 held
Skunk Squirrel Weasel	80	62	55.85	18 held 20 held
Sguirrel	20		1	20 held 51 held
Weasel	52 9	1 3	.50 19.25	6 held
Game	10			1 held
Beaver	12			11 released
Bear	20 carcasses	16	199.82	1 destroyed**
				2 held
	8 hides	2	}	1 to rendering co. 1 held
i	11 live	2	25.00	8 to game farm
	22,000	-		l to state re-
				formatory
Game birds	127	84	71.64	23 destroyed**
(Upland)	121	04	11.04	9 held, 10 unsalabl
				1 mounted
Waterfowl	8			4 destroyed, 1
				held, 3 to museum
Rabbit	45	40	8.55	4 unsalable
IVADDIC	30	40	0.00	1 destroyed**
Raccoon	52 live	18	118.50	84 released
Squirrels	8	2	.50	5 destroyed** 1 unsalable
Guns	i			1 Unsatable
Pistols and re-			-	
volvers	5	4	15.50	1 held
Rifles	180	108	1,114.50	9 held, 10 re-
			1	turned, 2 stolen, 1 to
			1	forestry div.
Shotguns	. 98	88	618.85	4 held
- i				6 returned
Miscellaneous Batteries	7	1	1.00	6 held
Boats	8i	10	60.85	20 held
2020				1 destroyed
Caviar			8.00	104lable
Christmas trees	480	50		104 unsalable 276 held
Decoys	48	21	10.00	22 held
Dogs	ĭ			1 killed
Hunting knives	.8	1	.75	2 held
Lights	48	1	.50	19 held 2 destroyed***
				i i stolen
				1 to worden div.
				1 to fisheries div.
_			١	18 to forestry div.
Loon Mounted loons.	1 live 2	1 2	1.00 20.00	
Packsacks	5	•	20.00	4 held
. acamacan	-		1	1 destroyed**
Swan	1 live			Released on refuge
Traps	1,148	563	52.07	577 held 8 given away**
Aves sled ice				O RIAGII WASA
Axes, sled, ice chisels, snares,				
sack, etc	21			10 destroyed
				10 held 1 returned
				1 returned

^{*} Sale price of cars based on Blue Book valuation of second hand cars.

Costs of cases subtracted from gross proceeds.

** Unsalable.

*** Public nuisance.

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WARDEN RECORD TOTALS

Year	Cases	Won	Lost	Fines	Costs	Seizures	Jail Sentences (days)	Per cent Cases Won	Per cent Seizures to Cases Won	Average Fine Per Case Won
1926–27 1927–28 1928–29 1929–30 1930–31	1,210 1,438 1,556 2,085 2,212	1,121 1,365 1,885 1,874 1,921	89 73 171 211 290	\$ 50,885.00 57,068.50 54,475.00 71,960.00 56,788.65	\$ 7,023.48 8,623.82 11,048.76 15,140.31 10,112.83	898 941 1,257 1,688 2,188	4.285 8.810 7.790 11,551 18,809	92.6 94.9 89.1 89.9 86.8	79.68.9 90.7.9 88.0	245.39 38.95 39.34 88.40 29.54
1981-82	10,969	9,698		84,058.00 \$825,175.15	\$,485.85	9,073	80,168	82.6	96.2	16.75

** 97 cases open.

* Outcome unknown in one case

Recrology

Hugh E. Percy

June 1931

District Forest Ranger

Thomas Debine

September 1931

Conserbation Warden

Max Happle

October 1931

Conservation Marden

William Reabe

January 1933

Conservation Marden

BIENNIAL REPORT

OF THE

STATE CONSERVATION COMMISSION

OF

WISCONSIN

FOR THE

Fiscal Years Ending June 30, 1933 and June 30, 1934



MADISON, WISCONSIN

BIENNIAL REPORT

OF THE

STATE CONSERVATION COMMISSION

OF

WISCONSIN

FOR THE

Fiscal Years Ending June 30, 1933 and June 30, 1934



MADISON, WISCONSIN 1934

STATE CONSERVATION COMMISSION July 1, 1934

COMMISSIONERS

RALPH M. IMMELL, Chair- Louis M. Hobbins, Secretary man. Madison

R. B. GOODMAN, Marinette

T. J. KOERNER, Manitowish

Madison

JAMES A. CORCORAN, Webster

NELSON LECLAIR, Two Rivers

STATE CONSERVATION DEPARTMENT

July 1, 1934

H. W. MACKENZIE

Conservation Director

DIVISION CHIEFS

C. L. HARRINGTON Supt. of Forests and Parks F. G. WILSON

Supt. of Co-operative Forestru

E. J. VANDERWALL Chief Forest Fire Warden

B. O. WEBSTER Supt. of Fisheries

ROBERT A. GRAY

Supt. of Commercial Fishing

MATT PATTERSON Deputy Director

BARNEY DEVINE

Chief Conservation Warden

WILLIAM F. GRIMMER Supt. of Game

D. H. KIPP

Supt. of Public Relations

LYDIA STUMPF Chief Clerk

LETTER OF TRANSMITTAL

HONORABLE PHILIP F. LA FOLLETTE Governor of Wisconsin

Sir: In accordance with the provisions of the law, we herewith submit the report of the State Conservation Commission of Wisconsin for the biennial period ending June 30, 1934.

Respectfully submitted,

STATE CONSERVATION COMMISSION,

RALPH M. IMMELL, Chairman, Louis M. Hobbins, Secretary, R. B. GOODMAN, JAMES A. CORCORAN, T. J. KOERNER, NELSON LECLAIR.

January 10, 1935.

TABLE OF CONTENTS

	Page
Foreword	8
Division Reports	
Administration	7
Statistics	
Forestry—Forest Protection	12
Statistics	87
Forestry—State Forests and Reforestation	21
Statistics	90
Co-operative Forestry—Forest Crop Law	30
Statistics	97
Co-operative Forestry—County Forests	30
Co-operative Forestry—Rural Zoning	_ 31
Emergency Conservation Work	_ 33
Statistics	_ 98
State Parks	49
Statistics	
Fisheries	_ 48
Statistics	
Game	_ 58
Statistics	_ 113
Law Enforcement	_ 67
Statistics	_ 119
Public Relations	_ 72

FOREWORD

Conservation may be best defined as "the full use of all our natural resources without permanent injury to those resources," Natural resources are taken to mean the lands, the forests, the waters, and the animal and plant life which inhabit them.

In early years, the idea was prevalent that our natural resources were inexhaustible, and the development of conservation was restricted largely to a negative type of regulations governing hunting and fishing. Gradually in later years, however, the sportsman and nature lover prevailed in the establishment of conservation as a public function relating to fish and game, state parks were developed, and after 1923, the state developed its forest conservation activities and established state forests.

The gradual decline in the lumber industry and the concern of the paper mills as to their continued supply of pulpwood brought an economic interest to conservation for the first time. Still stronger forces developed behind the economic need for conservation as a new exhaustion of our resources became apparent in recent years. The state's fertile soil through intensive cropping, through erosion, and through the lowering of water levels, was losing its fertility. Tax delinquency and land abandonment threatened to spread to the richest areas of the state.

Conservation has become the principle underlying the use of all land and water resources; sportsmen, farmers, foresters, tax boards, and business men alike have united in a common interest. Conservation, which began as the visionary ideal of a few, has become the goal of all.

In forestry, we have undertaken protection from fire on all forest lands while the regulation of the cutting of timber and the restraint of exploitation by local taxing agencies are made possible by the forest crop law. The state has found it profitable to grow timber on its own idle lands, planting thousands of acres to fast growing pulpwood species. Tax delinquency has placed a new public domain upon already impoverished counties as an additional burden, and legislation has established county forests and granted them state aids to be expended under the supervision of the conservation department.

The needs of the fishermen require more than propagation, aquatic conditions of the streams and lakes must be improved, and the increased depredations of rough fish must be checked. The commercial fishing industry in Wisconsin's boundary waters must be so administered that its activities may be a growing, rather than a declining source of employment to the citizens of the state. The requirements of larger and larger numbers of hunters, citizens of the

state, and desirable money-spending visitors from outside, have forced upon the state a far reaching and enormously complicated and technical program of game management.

The first need of the state is to conserve the soil and the waters which rain upon it. Forest protection and approved forest practices are necessary to prevent the washing away of the hills and destruction by all forms of soil erosion. Some species of land cover must be maintained and protected on millions of acres of wild lands in order to retain precipitation so that the state may be saved from the subsidence of ground water levels and the future desolation of advancing aridity.

All these, and countless more activities and responsibilities have been added to the scope of the conservation program. The conservation commission has toiled unsparingly to meet these complex and diversified responsibilities with the inadequate funds at its disposal. In fact, except for forestry funds, revenues have actually declined, making it impossible to add the needed personnel and equipment.

The entire conservation department has been taxed to the utmost to fulfill the added obligations, a few of which have been set forth in the foregoing. It has been impossible to be thorough in all undertakings and some not immediately urgent activities have had to be abandoned temporarily.

Every activity proposed for the coming biennium is vitally necessary, not only for the people of the state, but to conserve and develop the tax resources of the state. One half the area of the state has become governmentally insolvent, decreasing in industry, wealth, and population. In this sparsely populated half of the state, the only hope of future solvency lies in the restoration, development, and wise use of its natural resources.

Back of every forestry and conservation activity in this report is the objective of restoration and development of these natural resources upon which the state as a whole is now dependent and will be increasingly dependent in the future.

Part I—Section 1

ADMINISTRATION

The conservation commission is specifically delegated by law to administer Wisconsin's conservation laws. This report deals with the policies, methods, and proposed activities of the conservation commission and its agency of operation, the conservation department.

Origin and development

The first step toward conservation in Wisconsin was taken in 1867 in the creation of a committee to study forest conditions and effects of their denudation upon climate, rainfall, and erosion. This report was made but no material action resulted from its findings.

State timber agents were appointed in 1869, and an area of 50,000 acres in what was then Lincoln county was set aside as a state park in 1878, but this tract was broken up and sold to lumber companies in 1897. Finally in 1903, a State Department of Forestry was created, and provision made for the acquisition of lands for forest purposes. Two years later a state forester was appointed, but because of adverse public opinion, little real good was accomplished.

Various other conservation projects had their conception during and even prior to the forestry program, but were developed separately and independently from it. A fish inspector was appointed in 1866, a fish hatchery was established in Madison in 1875, fish wardens began to function in 1887, and in 1891 a State Fish and Game Warden was appointed. In 1895, there was created a fisheries commission of seven members, and in 1907 this commission appointed for its administrative officer, a superintendent of fisheries. As in forestry, in spite of this early beginning, there was no early state program with a definite objective in the propagation and stocking of fish, and the same is even more true in regard to game. Game wardens were appointed in 1887, and combined with the fish wardens into one department in 1891. Law enforcement continued under this plan until 1915.

The present state park system actually started in 1899, when the Interstate Park Commission was designated to develop lands along the St. Croix river in Polk county, in conjunction with a similar commission appointed by the State of Minnesota to undertake the same task on the Minnesota side of the river.

In 1915, conservation activities of the various existing commissions and boards were merged into one conservation commission. This step correlated the duties and efforts of the previous separate agencies into one closely knit organization with a unified purpose. There have been numerous changes in organization since that time, but the

fundamentals which went to make up that structure have remained much the same even though there has been a gradual, but constant expansion of duties and functions.

This first commission was composed of three members and a secretary, but was superseded by a single commissioner in 1923. Again in 1927, this office was abolished, and with a view to securing a wider viewpoint and aspect of conservation policies, the present State Conservation Commission was established. It is composed of six commissioners who serve without remuneration. The commissioners, three of whom must reside in the southern and three in the northern half of the state, are appointed by the governor with the advice and consent of the senate, to serve for six years. Two are appointed every odd year. This commission directs the policies of the conservation movement in Wisconsin.

The conservation program resulting from the policies established by the commission, is administered by a conservation director appointed by the commission. It is the responsibility of the conservation director to execute the policies of the commission and to direct and correlate the activities of the various divisions of the conservation department, each of which is headed by a superintendent responsible to the director.

Administrative policies and activities

At the present time, grouped under the general heading of State Conservation Department, there are nine divisions—administration, forests and parks, forest protection, co-operative forestry, fisheries, game, law enforcement, commercial fishing, and public relations. In addition to the activities directly indicated by the names of various divisions, there are others which have been administered jointly by one or more of the various divisions.

The conservation director is the logical connecting link between the various protecting, producing, and educational divisions of the department and the commission, the legislature, and other agencies both public and private within and without Wisconsin which concern themselves with conservation.

The division of administration has finance as its primary concern, including the collection of funds, budgeting, and accounting. General office management, the compiling and filing of records and reports for all divisions, sale of licenses, management of rough fishing contracts, special investigations, and maintenance of legislative contacts, also fall within the scope of the administrative division.

License policies

With the exception of specific appropriations for forest activities, all revenues of the conservation department are obtained from the state's share of co-operative contracts and from the sale of licenses. There are 25 specific licenses which are sold by the conservation department. Licenses for various activities are sold by county clerks and regularly authorized agents, or direct from the department's office in Madison.

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The conservation department receives approximately a half million dollars a year from license sales, exclusive of specific appropriations. This constitutes the conservation fund. All conservation activities except forestry are financed from this fund. The general economic depression of the past few years, multiplied the usual difficulties incident to the sale of licenses, and administration of this source of income has become correspondingly more difficult.

A change was made in the method of handling resident rod and reel, and non-resident fishing licenses during 1934. In the past these had been available only through the county clerks' offices and their established agents or deputies. By law, for this service, the department was charged a commission of 10 per cent by the county clerks' offices. During 1934, in addition to this method, the department established a sufficient number of license sales depots (such as hardware stores, resorts, and sporting goods stores) who were allotted licenses on a consignment credit basis. These depots were allowed 10 per cent commission on the sale of all non-resident fishing licenses, but they handled the resident rod and reel licenses without any remuneration. This resulted in a saving to the department of almost \$10.000 in commissions, and also resulted in a marked increase in license sales due to the availability of licenses, particularly around resort areas and on holidays and weekends when county clerks' offices were closed. This new policy is credited largely with the increase of approximately \$75,000 in revenue obtained from the sale of resident rod and reel, and non-resident fishing licenses during 1934.

All divisional conservation expenditures are budgeted by the conservation commission. Prior to 1931, the legislature made specific allotments out of the conservation fund for the various activities of the department. The present method has proved more satisfactory but it does add materially to the work of the administrative division.

The new accounting system which was started in the forestry division in 1931, proved itself so highly satisfactory that it has been installed in the park, game, and fisheries divisions during this biennium.

Records and reports

The records and reports of all divisions are maintained by the division of administration. These include budgeting and accounting records of payrolls of all divisions, all forest protection and reforestation reports, state park records, law enforcement reports including arrests and seizures, and game and fisheries production and distribution records. The detail of all records and reports will be found in Part II of this report.

Bounties

A complete and detailed report of bounties paid on wild animals will be found in Part II. It will be noted that the bounty law passed in the previous biennium has continued to keep bounty payments at a much lower level.

Legislation

The division of administration acts as a clearing house for all suggestions for new or revised legislation which come to the conservation department and commission, either from within the organization or from the public. All such suggestions are grouped and codified and record is kept for the benefit of the legislators.

Marsh restoration-Horicon marsh

The past biennium has seen the restoration of the water levels of Rock river in the Horicon marsh area, and the establishment of that area as a wild life refuge as directed and provided by law in 1927. A brief summary of the part played by the conservation commission and the conservation department in the restoration of Horicon marsh follows.

In 1927, the legislature enacted a law directing the conservation commission to restore the water levels of the Rock river in the Horicon marsh area, and establish a wild life refuge thereon. In 1928, the conservation commission made application to the railroad commission to erect a dam on the Rock river at Horicon for the purpose of restoring the necessary water elevations. The right to expend public moneys to construct this dam was contested in the courts, but the Supreme Court held the act valid. The dam was constructed, but permission to lower and close the gates was not sesured.

The project remained deadlocked until 1933, when the conservation commission took definite action to comply with the 1927 act.

It became necessary to secure lands and flowage rights in the southern end of the marsh area which would be affected when water elevations were placed at the right height. Where such lands and flowage rights could not be purchased, condemnation proceedings were instituted and the interests acquired through the courts.

Subsequently, the conservation commission filed an application with the Public Service Commission asking for an order permitting the closing of the dam gates at Horicon so that the waters of the Rock river might be raised to the required elevation. Permission was granted by an order received by the conservation commission on October 10, 1934 at three p.m. and at seven o'clock that night the gates of the dam were closed and have since remained closed.

The rights of all interested parties in the Horicon marsh area are governed by the declaratory judgment statute. The decision of the Supreme Court in further actions will determine the state's future activity in regard to the marsh.

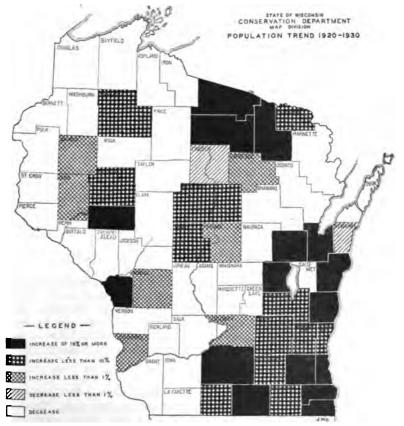
The results achieved to date may be credited to the co-operation given the conservation commission by the Public Service Commission, and to the assistance of the Attorney General's department, and the Adjutant General's office. The surveys and general field work were under the supervision of the map section of the forestry division.

Expanded activities

With the continually broadening scope of conservation activities demanding more and more overtime work in the finance division, and often resulting in the deferment and delay of routine filing and form letter correspondence in the stenographic and clerical division, it is imperative that the personnel of these divisions be considerably increased during the next biennium.

It is the purpose of the stenographic and clerical divisions to serve the various division chiefs in every way possible to enable them to give more of their time to formulating policies and directing the various field activities, and to maintain an accurate and complete record of all functions of the department.

The necessary expansions contemplated by the various divisions will make an imperative need for augmenting the personnel commensurate with the volume of work which will necessarily result.



#OURCE≻ REGIONAL PLANNING PEPORT AUGUST 1934

[&]quot;One half the area of the state is decreasing in industry, wealth, and population." (See Foreword)

Part I—Section 2

FOREST PROTECTION

Introductory

A sound forestry program must be and is the basis of the conservation program in Wisconsin. All natural resources—game, fish, outdoor beauty—depend directly or indirectly on some type of forest growth for food, cover, or protection. Primary in importance in forestry is an effective program of forest protection.

Forest protection may be divided into three activities—fire prevention, fire detection, and fire suppression. Heretofore, all systems were so organized that fire detection and suppression were stressed rather than fire prevention. Now, however, this attitude has changed and fire prevention is recognized as extremely important.

Forest protection districts

There are 11 forest protection districts in the state, each comprising from 800,000 to 1,500,000 acres. They aggregate 12,600,000 acres. These 11 districts are grouped into four forest protection areas—northern, eastern, western, and central. The northern area is composed of Districts 3, 6, and 8; the eastern area of Districts 4, 5, and 9; the western area of Districts 1, 2, and 7; and the central area of Districts 10 and 11. Each area is in charge of an area supervisor, and a district forest ranger is in charge of each district. These supervisors and rangers are responsible to a chief forest fire warden, who in turn is responsible to the conservation director. The following map shows the areas, districts, and district headquarters of the forest protection organization.

Fire prevention

Fire prevention requires the consciousness of all the people who live in or visit a forest area, that forest protection is a state asset. Such a public consciousness can be attained only through education. By contact with groups such as schools, city clubs, women's clubs, Boy and Girl Scout groups, junior forest rangers, 4-H clubs, farmers' institutes, the conservation department has furthered this education.

Fire suppression

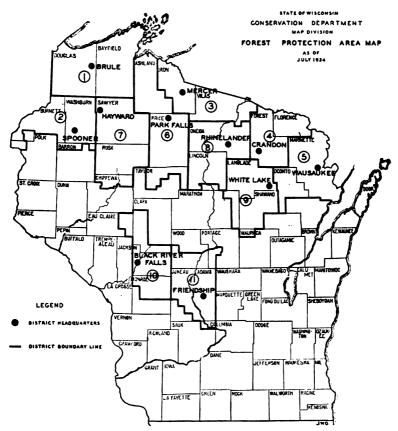
The objective of the forest protection organization in fire suppression is to confine every fire to the smallest possible area. This is accomplished by reducing the elapsed time between the time the fire is reported and the time the crew reaches it, and by having the crew stay on the fire until it is absolutely out.

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Adequate fire suppression requires the use of all roads, public and private, for the purpose of transportation to all places in forest protection districts where fires are likely to occur. Men drafted to fight fires must be above the suspicion of incendiarism, and care in selection of crews is a vital factor in effective fire suppression.

Fire statistics

The prolonged drouth which began in midsummer of 1929, continued through 1933, and culminated with the dust storms of May, 1934. In 1933, there were 3,659 fires which burned a total of 259,041 acres, causing \$326,743 damage. The area burned per fire was 71 acres, though in seven districts the average did not exceed 35 acres per fire. In district No. 10, comprising parts of Monroe, Jackson, Clark and Eau Claire counties, with an extreme fire hazard in the drained peat marshes, the fires were held to the low average of 16 acres. In district No. 8, composed of Oneida and Lincoln counties, several fires which originated outside of the protection territory, burned together into the largest fire of the year.



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The fire season began with three fires in February, and ended with 13 fires in November. In the sandy soil districts, fires were most numerous in April, but on the heavy hardwood soils, August brought the largest number. The coincidence of drouth and prevailing unemployment must be charged with excesssive destruction of forest growth. Because of these factors, incendiaries ranked second as a cause of fires on national forests, and third in the state forest protection districts where land clearing naturally brought a higher percentage of fires from that source than within national forests. Wisconsin's fire fighting costs were three times greater than in 1932.

In 1934, a total of 2,873 fires was reported. They burned 127,793 acres with damage of \$115,419. While lightning caused 86 fires, these burned only 264 acres. Smokers and land clearing fires tied for first place as the cause of fires, each causing 31 per cent of the total. Smokers, land clearing, and incendiary fires caused more than three fourths of all the fires.

While incendiary fires decreased in number as compared with 1933, the acreage burned and the resulting damage increased. Fires which were wilfully set, burned nearly half of the total acreage and caused more than half of the damage. There is need to amend the statutes pertaining to arson to cover the malicious setting of forest fires. Two men who pleaded guilty to setting 15 fires received only 60 day jail sentences.

During the year, 189 arrests for violations of the fire laws were made, and 165 persons were convicted. In addition, the costs of putting out 75 fires were collected from the parties responsible for the fires, or 14 more than in 1933.

Measure of achievement

The true measure of the effectiveness of a forest protection organization is found in the percentage of fires held to 10 acres or less. This figure for 1933, was 72 per cent, and in 1934 it was raised to 81 per cent. In district No. 3, composed of Vilas and Iron counties, 96 per cent of the 217 fires reported were held to 10 acres or less, and only two of these fires exceeded 100 acres.

Fire report forms were revised in 1933. For the first time distinction was made between lands bearing merchantable timber, young growth, denuded forest land, and non-forest land. It is, therefore, known that the 71 acre average fire of 1933 consisted of 49 acres of forested land and 22 acres with no forest growth. In 1934, the average fire covered 44 acres, again with 22 acres of denuded or non-forest land and only 22 acres bearing some type of forest growth. Thus, the acreage of forested land burned per fire was reduced from 49 acres in 1933 to 22 acres in 1934.

Special regulations

During the fire situation in the spring of 1934, one of the most dangerous the state has ever known, the conservation commission took aggressive steps to curb the growing forest fire menace in the state.

The drouth, added to four years of precipitation deficiency, had created a terrifically hazardous situation. One of these steps was an order to prohibit smoking throughout state forest protection districts except in specified places, prohibiting building of camp fires anywhere except at authorized camp grounds or places of habitation, and prohibiting brush burning without special permit. This was a stringent regulation, but vitally necessary under the existing fire hazard.

Smoking was permitted only at places of habitation, improved and authorized camp grounds, or in automobiles operating on state and county highways providing such automobiles were equipped with ash trays. The order further stated that it was illegal to throw any burning material out of cars.

The people of Wisconsin and visitors co-operated better in 1934 than ever before in preventing fires. Because of this co-operation it was possible to make a better record than for many years past.

Another order passed by the conservation commission prohibits any person or persons to travel with automobile or other vehicle on or over any fire lanes, truck trails or roads built for fire fighting purposes, unless a permit has been issued to them by the State Conservation Commission, the State Conservation Department or its representatives.

General situation

From 1927 to 1933, the number of fires increased annually, but 1934 showed a decrease. The conservation department credits the organized patrol of back roads and trails, with warnings to people and tagging of cars, for the reduction in the total number of fires.

The patrol system, additional equipment and more effective field personnel, together with the help of the CCC camps, are credited with the reduction in direct fire fighting costs which were the lowest since 1929, and less than one-third of the 1933 figure. It is pointed out that, despite extremely high hazard, an increase of allotments for administration and equipment will reduce acreage burned, fire fighting costs, and total costs.

Patrol system

During the severe fire scason of 1934, the conservation department inaugurated a plan whereby 103 special emergency fire wardens were employed to work under the direction of local conservation wardens enforcing forest fire laws in the forest protection districts. From one to five special officers were employed in each county, depending upon the proportion of the county in the protection district, and the hazard. Local conservation wardens supervise this enforcement work, thus relieving forest officers to devote full time to fire prevention and suppression. These special officers patrolled all back roads, trout streams, lakes, camping grounds, and other places people are likely to create a fire hazard. All cars in back country were tagged with special red tags which explained the fire hazard and fire laws, and requested co-

operation in preventing fire. These emergency fire wardens were state officers and could enforce state fire laws regardless of county lines.

This plan is in addition and supplementary to the co-operative plan between the conservation department and the various counties to put on special deputy sheriffs for this purpose. Deputy sheriffs cannot cross county lines in law enforcement, and in this type of work it is frequently necessary to do so.

Co-operative patrol system

The co-operative plan was proposed to the conservation department by Iron and Vilas counties during the summer of 1933. It provided for the employment of three or four patrolmen per county to cover back roads, warn tourists and settlers of the need of care with fires, tag parked cars with special warning tags, and to put out any small fires which were discovered. 'The plan was approved and the counties were credited on their accounts of suppression costs with half of the patrol cost.

The results were so satisfactory that the plan was proposed to other counties in 1934, and many adopted the plan. The conservation department is convinced that this prevention campaign kept the num-



Stairway type lookout tower.

ber of fires occurring during the spring drouth, within reasonable limits. As a result, the forest protection organization was not overloaded beyond capacity and was able to keep most of the fires to reasonable size. Nearly one-third of the 1934 fires were held to less than one-fourth of an acre.

Lookout towers and telephone lines

During the biennium the number of lookout towers was increased from 108 to 119. Actually, more than 11 new towers were erected since some old towers were replaced. It was also found desirable to relocate several towers to secure more effective reporting of fires.

The number of miles of telephone line available to the organization is 1,135 which is almost identical with the figure of two years ago. However, 175 miles have been abandoned, largely within national forest boundaries, and 915 miles have been built, rebuilt or converted from ground to metallic circuit. The federal emergency conservation work contributed towers, telephone materials, and labor from the CCC camps to bring the department to its present high standard.

The United States Geological Survey conducted a triangulation survey by using the lookout towers as observation points. This provides an accurate survey base extending from Wisconsin Dells to the Bayfield peninsula, and from the Menominee river bordering Michigan to the St. Croix river bordering Minnesota. The department now has precise horizontal control for forest protection district maps. The towers are now being tied to township corners and more accurate maps are being drafted so that errors in locating fires will be eliminated.

Equipment

Additional trucks of one-half and one and one-half ton capacity have been purchased to meet the forest protection needs on more than 12,000,000 acres. This department now operates more motor vehicles than all other state departments combined, and most of these are the forest protection trucks. Another crawler type tractor of 20 drawbar horse power, per district, has been purchased so that each district now has two. A tilting platform trailer has been designed and built by the forest protection engineer for transportation of tractors and plows. A new type of plow has been secured. A rolling coulter lifts the plow out of the ground when an obstruction is encountered. Further developments in plow construction are being worked out with a Wisconsin manufacturer.

Some experience has been gained with centrifugal pumps, and their advantage over piston or rotary pumps on forest fires is demonstrated. One Wisconsin manufacturer has placed on the market a 70 pound centrifugal pump driven by an outboard motor, the unit having been developed in consultation with the conservation department. Another is now building a two stage centrifugal pump driven



New type of plow used in fire fighting.



Trailer pumping unit built by conservation department.

by a four cylinder four cycle motor, the unit to weigh about 220 pounds. The first of 12 larger units has been built by the department using a four cylinder truck motor to drive a 300 gallon per minute centrifugal pump, the unit to be mounted on a two wheel trailer.

A survey under the supervision of a geologist is being conducted through the CCC camps to determine the areas where wells can be jetted to provide water for fire fighting. The method has been used successfully on several fires.

Headquarters and repair station

The department has purchased at Tomahawk the building formerly used as an iron works. It is 100 by 180 feet, of fireproof construction, and equipped with seven traveling cranes. It will serve as



Forest Protection Headquarters station at Tomahawk.

shops for building or developing new equipment or repair of present equipment, including the trucks and tractors of the CCC camps under the supervision of this department. In addition, it will serve as a supply depot to provide additional equipment to any district when a serious fire situation develops.

CCC

The work of the CCC camps has greatly augmented the facilities for forest protection and fire fighting. During 1934, the CCC camps constructed truck trails and fire breaks, erected miles of telephone lines, lookout towers, and removed fire hazard from many miles of roads, trails and forest land. A detailed record of the CCC fire prevention, suppression, and forest protection activities is given in Part I—Section 5 of this report.

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Expanded program

Experience has demonstrated that effective forest protection depends on more intensive supervision by competent men. The plans for the ensuing year list for each forest protection district averaging more than one million acres, the following personnel: one district ranger, two forest rangers, one dispatcher, and one mechanic for 12 months. In addition, three rangers for 10 months, nine towermen for seven months, 10 patrolmen for five months, and five temporary laborers for seven months are required.

The staff planned for the full year is required to maintain the organization, repair equipment, and enforce the laws on timber trespass on state and county lands. The stealing of timber usually takes place during the winter months.

The tower and telephone line system is practically completed. However, additional buildings are necessary. Three to four ranger stations per district are required to reduce travel distance and travel time in going to fires. Additional garage and storage space is also needed to store the added equipment.

To bring equipment to an adequate standard, three portable pumpers, two plows and a trailer for transporting tractors and plows, are required for each district. One small crawler type tractor, three trucks, two pumpers, and 2,000 feet of hose, plus hand tools, will be required for each district as annual replacement.

The new warehouse and field headquarters provide facilities for developing new types of fire fighting equipment or modifying and adapting commercial equipment to the needs of the forest protection organization. Co-operation with Wisconsin manufacturers in the development of commercial equipment will continue.

While radio communication is not expected to supersede the telephone system, it will be tried out for communication between district headquarters and trucks in the field, so that trucks may be directed from one fire to another.

Part I—Section 3

FORESTRY—STATE FORESTS AND REFORESTATION

(State Forests)

Introductory

At the beginning of the present biennium, the conservation department was administering four areas of state owned forest land which had been definitely established by the commission, or under the law, as state forests. These were the Northern State Forest in Vilas county, including a total state owned land acreage of approximately 104,000 acres; the Flambeau River State Forest in Sawyer county, containing a total acreage of state owned lands of approximately 3,000 acres; the American Legion State Forest of approximately 18,000 acres of state owned land in Oneida county; and the Brule River State Forest of approximately 4,000 acres of state owned land in Douglas county.

As set forth in the report of the previous biennium, state owned lands in Wisconsin are of two classes. First, those under the administration of the commissioners of public lands; and second, those that come under the jurisdiction of the conservation commission. The commissioners of public lands act as trustee for trust fund lands, all proceeds from the sale or management of which go into various school funds. The conservation commission has under its jurisdiction only those lands expressly and specifically set aside as state parks or state forests.

The policies of the conservation commission regarding state forest management, take into consideration primarily their effect upon privately owned forest lands. State forests should be proving grounds where proper forest management can be best demonstrated to lead landowners to similarly manage their own lands to best advantage. Under this policy the four state owned forest areas are operated.

Activities

The principal activities during the present biennium occurred within the limits of the Northern State and American Legion forest areas where an expansion was made in the general improvements on these areas, and this is especially true of the areas which have been set aside as public camp sites where a definite effort was made to improve water supplies for domestic use. Part of the time these public areas had been supplied with water from relatively shallow wells, but arrangements now have been carried out whereby each of the principal publicly used camping areas has been equipped with a high type, cased deep well. It is felt that the wells which have

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been drilled will supply an adequate quantity of pure drinking water. In other respects, the general sanitary facilities on these areas have been also improved, and the maintenance and policing was carried out to better advantage during the present biennium than had been the case in previous years.

With the advent of the Civilian Conservation Corps, a great deal of forest cultural work, fire hazard reduction, improvement on trails, improvement of streams and lakes within the limits of the state forests and various other items of forest work were carried forward



Exterior view of white pine plantation 34 years old, averaging 40 feet in height.

actively. More work of this character was done on each one of the existing state forests during the present biennium than had occurred in all the years preceding. (See report of CCC activities in Part II.)

Forest roads

The condition of the primary forest roads, particularly in the Northern State Forest, containing approximately 70 miles, was materially improved; new construction seeking better alinement and width was also undertaken, new gravel completed, and the entire system was oiled each year so that at the present time an oiled, matted gravel road has been built for the entire primary state forest road system. This road is dustless and very satisfactory for the travel in the state forest areas, which include not only the commercial travel of the neighborhoods concerned, but a considerable travel

for pleasure purposes as the forest areas are in the lake and resort sections of the state. For the secondary forest road system, some new work was completed and the existent roads adequately maintained.

Co-operation with other state agencies

All road work within these areas is handled jointly between the State Highway Commission, and the conservation department.

Under the co-operative agreement with the State Board of Control, the three state forest camps which had been previously established, and in which prison labor is used for forest improvement work have been continued. These camps are located at Athelstane in Marinette county, Gordon in Douglas county, and Lake Tomahawk in Oneida county. The forest work conducted by the prisoners is under the jurisdiction of the conservation department, and the plan which was developed several years ago has worked very satisfactorily. The conservation department furnishes the supervision for forestry work and the equipment to conduct the forestry work. The State Board of Control looks after all items relating to discipline, food, shelter, clothing, and the conduct of the camp itself.

In all other respects the work on the state forests, such as fire lane construction and maintenance, slash and brush burning, surveying, refuge posting, construction and maintenance of buildings, policing and improvement of camp grounds and similar activities, has been carried out as matters of routine.

Survey for land acquisition

Considerable additional information has been assembled respecting privately owned lands suitable only for forest purposes within the limits of the present state forest areas. While no active land purchase was made during the biennium, the information assembled, and the growing information about possible land development in these forest areas will be helpful when the time comes for the actual acquisition of additional land. Much information also has been assembled in connection with land exchanges either with the counties concerned or with private owners.

Expanded activities

During the next biennium, it is not proposed to materially increase the limits of the state forests by the acquisition of additional acreages of available land suited only for forest purposes, but to maintain and provide for a reasonable amount of development for the property and land which is now a part of the respective state forest establishments.

There is a constantly growing need for the intensification of all forestry work on the state forests, and having in mind the growing need for this intensification of forestry work, additional funds are

necessary for a strengthening of the technical services which will be required to bring these areas to the point of development to which they must be eventually brought.

The work on the state forests largely concerns itself with the development and maintenance of the state forest roads, the improvement and policing of public camp grounds, the protection of the state owned property from fire and trespass, the improvement of the growing timber stands, cultural practices undertaken for the betterment of the forest growth, details relating to the leasing of land, the exchange of lands, the care and protection of physical property such as buildings, and similar items which would naturally arise from the ownership and development of any forest property.

The respective state forests are now furnishing additional recreational opportunities for the people of the state. More than 200 miles of lake frontage, some of the finest in that part of the state, is owned by the state in Northern State Forest alone, and this area as well as the other state forest areas, are adding to the recreational possibilities of the state forests.

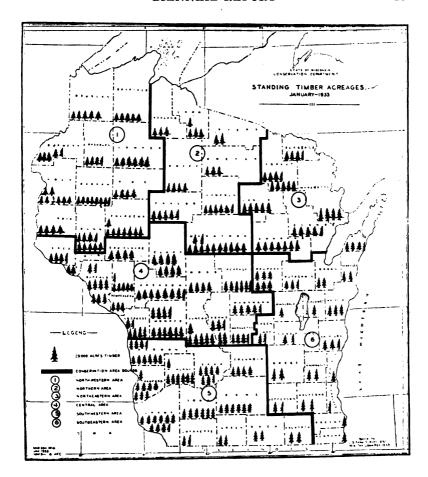
The purposes of the previously mentioned state prison camps is well understood, and the men from the state prison are working in forestry work within the limits of the state forests. It is not intended that an expansion of this activity be made, but plans for the next biennium have been made to continue the co-operation with the State Board of Control.

Reforestation

The program of forest planting of the conservation commission initiated in 1932, calling for an acreage of from eight to 10,000 acres per year, was temporarily disrupted in 1933 because of the shortage of planting stock and because of the extreme drouth which existed in the fall. An area of 4,352 acres was actually planted in 1933. With the development of additional nursery facilities commencing in 1932, an adequate supply of forest planting material was available during 1934, and the program of the commission was carried out in full. An area of 12,532 acres was planted in 1934.

The work of land examination and the assembling of necessary equipment went forward during the past biennium, and a better understanding exists today in connection with the reforestation under the enlarged program than has been the case heretofore. From a weather standpoint, the years of 1933 and 1934 were unfavorable for the planting of any tree crop, but the results in the field are relatively satisfactory considering the hot, dry weather which prevailed and the drouth conditions which existed over the entire state.

The detailed records concerning planting for this biennium, and other pertinent information concerning this work, will be found in Part II of this report.



Co-operative reforestation enterprises

While the principal work in connection with reforestation is done on the lands owned by the state within the limits of the state forests, much of this work was done on county owned lands during the biennium. This was brought about largely because of the location of CCC camps. The records of planting on county forest lands will also be found in Part II of this report.

Forest tree distribution

The policy under which planting stock is furnished at a reasonable price to private landowners for reforestation purposes in the state, was continued during this biennium. During the calendar year 1933, 822,950 trees were distributed under this policy, and in 1934, 1,486,725 trees were distributed. The conservation depart-

ment also co-operated with the extension division of the College of Agriculture at the University of Wisconsin, in advancing this program.

Windbreak and shelter belt planting

The hot, dry weather of 1933, and particularly of 1934, and the lowering of the water table in various communities, together with the dust storms, focused attention on the need for trees and shelter belts for windbreak purposes. A well organized and enthusiastic demand arose in the central counties, particularly Waushara, for an extensive program of tree planting.

Through the office of the county agent and other interested agencies in those counties, surveys were made to determine the requirements for shelter belts. As a result, the conservation department has been called upon to develop from three to five million four year old, once transplanted trees suitable for sandy locations for Waushara county alone. The tendency is for this work to expand, and arrangements are being made for the establishment of a transplant area of sufficient size in the central counties to take care of the requirements in this respect.

The conservation department has been very anxious to co-operate with the counties concerned in the development of this very worth while undertaking. It is proposed that the trees will be grown with labor furnished from a state prison forest camp, and the planting will be done in the counties affected either by the landowners themselves or by available public relief labor. This co-operative undertaking and the spirit which prompts it, is one of the most important phases of the reforestation work in the state during the biennium.

State Forest Nurseries

Trout Lake nursery

The enlarged program for the raising of forest trees at the Trout Lake nursery was continued during the biennium. Complete records of the distribution of forest trees from the nursery are given in Part II of this report.

Wisconsin Rapids nursery

The work of developing the forest tree nursery located just south of Wisconsin Rapids in Wood county, was done during the biennium. The first trees were officially produced in the spring of 1934, and the output of the nursery for 1934 helped materially to meet the requirements for the completion of the planting program for the year.

The final extension of the water system at the Wisconsin Rapids nursery will be completed in 1934, and the two nurseries now under operation will be able to turn out sufficient trees for the requirements of the department for a number of years to come.



Seed beds at Wisconsin Rapids nursery.

Soil fertility at nurseries

Investigations have been made during the biennium in connection with the soil fertility at both the Trout Lake and the Wisconsin Rapids areas, and a definite program of soil building has been worked out. This is especially important because the soils in both nurseries had reached the point where they were run down and the general vitality and size of the trees had suffered, and it was important that a program of soil rejuvenation be worked out and that it be continued from year to year as a definite part of the nursery practice. This has been done by the conservation commission co-operating with the University of Wisconsin.

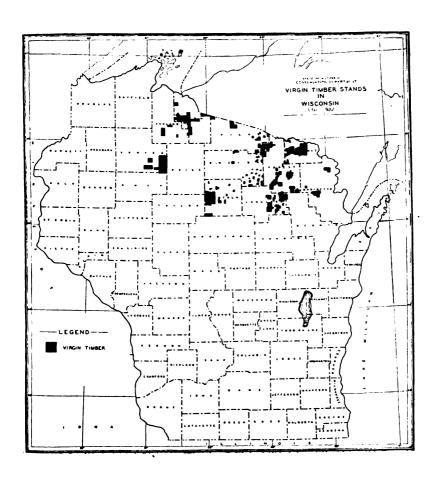
Contemplated nursery requirements

The combined facilities of the Trout Lake and the Wisconsin Rapids nursery will be ample to take care of all demands for seedling trees. The outlets for this stock are for the planting of state owned and county owned forest land, for forest extension work through the extension forester of the College of Agriculture, and for boys' and girls' 4-H club work through the College of Agriculture. In addition to these demands are those for distribution to private landowners for private forest planting where the state encourages such development, and for miscellaneous departmental or public forest work which may develop from time to time.

The forest planting program recommended is based on the 10,000 acres per year in accordance with prior direction of the conservation commission, but provision is made for an increase in the number of trees to be planted per acre from an average of about 1,000 to an average of about 1,500.

The total number of two year old seedling trees which will have to be produced annually to take care of anticipated requirements for this generally expanded program would be between 25,000,000 and 30,000,000, and the present nursery facilities are adequate to produce this number of trees.





Part I—Section 4

CO-OPERATIVE FORESTRY

Forest Crop Law

The entry of lands under the provisions of Chapter 77 of the Wisconsin Statutes, continues to increase each year. There are now 252,436.91 acres of privately owned lands, and 1,123,745.48 acres under county ownership, entered under the forest crop law. Under present economic conditions, forestry as a commercial enterprise cannot find much financial support. The entries by counties are increasing at the rate of about 200,000 acres per year.

With respect to county applications, the conservation commission has established the policy that only well blocked lands will be approved for entry. Experience has shown that scattering lands are constantly subject to withdrawal and sale.

The lands entered in 1928, have been examined and unproductive lands have been cancelled and restored to the tax rolls. Examination of lands entered in 1929, 1930, and 1931, has been completed, and hearings on cancellation of unproductive lands will be held. The law provides that all lands shall be examined every five years, and the department is interested in cancelling unproductive lands earlier during the first five year period so that state aids will not be paid unnecessarily for several years.

County Forests

Twenty two northern and central counties have established county forests under the provisions of Section 59,98 of the Wisconsin Statutes. These county forests contain 1,111,125 acres of county owned forest crop land. This department co-operates closely with the counties in the development and improvement of these forests. Foresters working with county board committees have worked out forestry plans and budgets and have given the necessary technical supervision. In addition, much work has been done by CCC camps under state supervision. In fact, the existence of the county forests justified the number of CCC camps allotted to the state.

In addition to the building of fire breaks, hazard reduction and other forest protection work, more than 11,000,000 seedlings were planted on county forests during 1933 and 1934. In a sense, the county forests are auxiliary state forests, for which the county contributes the land, the state contributes funds for forestry and the technical supervision, and both share in the income from future

timber crops. The work of the CCC camps is helping to make these areas productive at an earlier date than would otherwise be possible.

Greater care by county boards and their committees is required to guard against the sale of county owned lands within county forests. In several instances, lands entered under the forest crop law and bearing timber of commercial size, have been sold without notification to this department.

All counties having county forests will be encouraged to enact a standard county forestry ordinance prescribing the powers and duties of county officers with respect to forestry matters. They should contain the provision included in the Langlade and Oconto county ordinances that county lands within the boundaries of county forests may not be sold. The conservation department has been instructed by the conservation commission that in cases where counties sell forest crop lands, a hearing shall be held to determine which of the county lands are actually held for forestry or whether the counties are merely entering lands to secure the state contribution until there is an opportunity to sell the land.

Rural Zoning

In co-operation with the extension service of the College of Agriculture, the conservation department has responded to the requests of 24 northern and central counties for assistance in rural zoning. Enabling legislation authorizing counties to zone for agriculture, forestry, and legislation was enacted by the 1929 legislature, but the time was not ripe for action until the fall of 1932. During the interim, the development of county forests had resulted in establishing forestry as a form of land use. The counties had also been rejecting applications to sell tax deed lands within county forests both to secure better blocking and to prevent scattered settlement with resultant excessive costs for roads and schools.

When a settler secured land within one of the Oneida county forests and applied for a school for his children, while his wife applied for the teacher's appointment, the county board sought a means of preventing further cases of this kind. On request for assistance in drafting a county zoning ordinance and map, the help of the Attorney General's office was secured. It was considered advisable to go further than the law required, and conduct educational meetings in each of the towns affected so that the people would have a full understanding of the project. As a result, popular demand increased by 50 per cent the acreage restricted in the committee plan. In May, 1933, Oneida county enacted the first zoning ordinance closing large areas of submarginal land to agricultural development.

The movement spread rapidly, and by December 15, 1934, 18 counties have closed 4,700,080 acres to agricultural development. Action is pending in an additional six counties. All of this has been accomplished without any great funds to reduce crop acreage. From the

standpoint of the state budget, it is important that these counties, which normally receive more in state aids than they contribute to the state treasury, have put their affairs in order. By preventing scattered and isolated settlement, the counties have shown their good faith in stopping unwarranted expansion of road and school aids.

While no state department was designated to sponsor rural zoning, the conservation department was concerned with securing better blocking of county forests and preventing the forest fires and conservation law violations which result from scattered settlement.

STATUS OF RURAL ZONING

December 15, 1934

Counties with Zoning Ordinance Enacted

Ashland Forest Oneida Bayfield Price Iron Burnett Langlade Sawyer Clark Vilas Lincoln Douglas Marinette Washburn Eau Claire **Oconto** Wood

Counties with Zoning Ordinance Pending

Chippewa Jackson Rusk Florence Polk Taylor

Part I—Section 5

WISCONSIN EMERGENCY CONSERVATION WORK (ECW)

(Civilian Conservation Corps (CCC))

Introductory

Within three months after the approval by the President on March 31, 1933, of an act providing for emergency conservation work for the relief of unemployment, 23 civilian conservation corps camps of 200-man strength had been established in Wisconsin under the supervision and direction of the conservation department. Fourteen of these camps were placed in carefully selected locations within the 11 forest protection districts. The work of these camps consists of reforestation and improvement cutting on lands suitable for timber production; construction of truck trails, fire breaks, forest telephone lines, and fire lookout towers; cleaning and elimination of snags and other fire hazards; control of tree pests and diseases with special attention paid to white pine blister rust; improvement of state parks, public camping and recreation grounds, trout streams and game refuges; fire suppression; and other work incident to the protection and development of forest areas.

Preparation for work

The conservation department was well prepared for a program of this kind. In 1932, with funds provided by state unemployment relief legislation, the department expended \$464,000 in the construction of fire breaks. Eighty-five per cent of this amount was paid out in wages to persons on local relief rolls. The work in 1932 was a mere beginning of an unlimited amount of forest protection and improvement work. When the Emergency Conservation Work program suddenly developed, therefore, the conservation department was ready to continue the work it had begun. Already it had many projects planned and laid out and was able to show without question, that a large number of camps could be effectively put to work in the state.

Soil erosion camps

Through efforts of the conservation commission, in which neighboring states joined, the scope of the civilian conservation corps was extended to the prevention of soil erosion in critical areas and nine camps were established during the summer of 1933, in the south-

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western and central western part of the state, for this purpose. Soil runoff and the cutting of deep gullies in agricultural lands has been an ever-increasing problem in the farming districts of the state. Much research work in this field has been done by the College of Agriculture under the Extension Division of the University of Wisconsin, and many types of structures and other methods of preventing soil erosion had been developed. In order to take advantage of this research, and to continue the work which the Extension Division had already started, it was felt that the College of Agriculture was the logical agency to assume immediate supervision of the soil erosion program. It was felt, also, that the greatest amount of public benefit would be derived if the soil erosion program were carried on as an educational activity. The camps were, therefore, scattered as widely as possible in the areas where soil erosion had done the most serious damage, so that the largest possible number of farmers could see the results gained by the structures installed and the improved farming methods brought about.

Soil erosion work

The work of the soil erosion camps consists mainly in building soil erosion dams of masonry, reinforced concrete, rocks and brush, planting black locust, willow and other species of trees, and laying out fences and terraces. In order that the government might maintain



A typical soil saving dam. Note that the gulley threatened even the farm buildings.



This picture was taken one year after the construction of the dam shown in the previous picture.

control of the structures erected, and might secure the fullest cooperation of the landowner, legislation was passed enabling the state to enter into agreements with the landowner whereby he would furnish certain amounts of team labor, would maintain the structures for a definite period of years, and would practice improved agricultural methods such as strip and contour farming on certain fields and refraining from pasturing steep slopes and woodlots. The state has entered into 515 of these co-operative agreements.

The farmers in Wisconsin have been quick to realize the benefits of soil erosion control. When they are able to carry on this work with private funds, the ultimate aims of the Emergency Conservation Work program and the University Agricultural Extension Division will be fully realized.

Federal camps

In addition to the camps under the direction of the conservation commission, the United States Forest Service operates a number of camps in the national forest units in the state, and the Department of Interior a number of camps engaged in park improvement work in Milwaukee, Racine, and Kenosha counties. The Department of Interior is also in charge of ECW in three Indian reservations in Wisconsin, although the camp plan of organization is not followed on the Indian reservations.

Conservation camps

During the second period of ECW from October 1, 1933 to March 31, 1934, the conservation department operated 19 forestry camps; during the third period from April 1, 1934 to September 31, 1934, there were 19 forestry and eight erosion camps. The number and location of state camps and the number of federal camps in Wisconsin during these periods is shown by a table in Part II of this report.

Unemployment relief Purpose

The first and primary purpose of the civilian conservation corps is the rehabilitation and building of men. It is essentially an unemployment relief measure. Young men are taken from the depressing environment of desolation and unemployment, and placed in healthy out-of-door surroundings where they are given the opportunity of working at a gainful occupation and keeping their minds occupied.

Enrollment and quota

Men enrolled must be selected from families on local relief rolls. They are given an allowance of \$30 per month, the greater share of which is paid to the families of the workers. As the men are selected on a population basis the substantial reduction in local relief burdens is distributed equally throughout the country.

The national quota was originally 250,000 unmarried men between the ages of 18 and 25; 25,000 men living in the immediate vicinity of the camps, who were especially selected for their experience and knowledge of woods work; and 25,000 veterans. This was on the basis of establishing approximately 1,500 two hundred-man strength camps in the country. As the camp strength was later changed to 250 men, the national quota was raised to approximately 375,000 men. Enrollments are made for a period of six months, with the privilege of re-enrolling for an additional six months. When men have completed one year's service, they are replaced by new enrollees.

The present quotas assigned to Wisconsin, and the number of men enrolled in Wisconsin from April 1, 1933 to September 31, 1934 are as follows:

	Wisconsin Quotas Assigned	Men Enrolled April 1, 1933 to September 31, 1931
Young men 18-25 years Local experienced men	700	19,140 2,000
War veterans		1,725 22,865*

^{*} Totals do not include Indians working on Indian reservations.

Selection of men for enrollments in Wisconsin has been made by local relief directors originally under the direction of the Industrial Commission and later under the direction of the Wisconsin Emergency Relief Administration. Enrollments have been made by the United States Army, and enrollees have in most cases been taken to concentration camps where they were given two weeks of training and conditioning before being transferred to the work camps.

Camp organization

The United States Army is in charge of operating the camps, feeding, clothing, and housing the men, and is also responsible for their health, conduct, education, and entertainment.

Work projects

Work projects are supervised by the conservation department under the direction of a camp superintendent and eight to ten project foremen. Projects are laid out and planned by the camp superintendents under the direction of district rangers and area fire wardens, so that they may all be properly correlated with the conservation department fire protection program in the 11 forest protection districts. During the eight hour working day the men are turned over to the camp superintendent and project foremen for work.

Provisions are made for eight per cent of the camp strength to receive an allotment of \$36 per month and an additional five per cent of the camp strength to receive an allotment of \$45 per month. This serves as an incentive to the men to take an interest in their work. The leaders and assistant leaders who are paid the higher allotments, are used in the capacity of sub-foremen, machine operators, mechanics, truck drivers, office clerks, and barracks leaders. Many very good woodsmen have been developed and many men have received excellent experience as mechanics, truck drivers, and in other specialized fields which will be of much value to them when they return to private life.

Camp buildings

Each camp is provided with eight warm, sanitary, and well constructed barracks, a clean and well kept mess hall, kitchen, shower, and washroom, a recreation hall, and offices and quarters for army and conservation department personnel. Hot water and electricity are provided.

Non-military organization

Although the camp is in charge of the army, the CCC is entirely a non-military organization. No military training of any kind is given. The army has been selected to operate the camps because of its facilities for handling men and providing for their food, shelter and entertainment. The conservation department and other tech-

nical agencies directing emergency conservation work are fortunate, indeed, in having an organization as experienced and capable in the operation of camps as the United States Army.

Camp activities

Each camp has an educational adviser employed by the army. Classes are held in practically all elementary, high, and vocational school subjects, and many advanced courses are given. Motion pictures, both educational and entertaining, are shown regularly. Athletic events in the camps and between camps take a foremost part in camp life. Dances are regularly sponsored in the camps.

Camp infirmary

Each camp has an adequate infirmary with an army doctor in charge. Serious cases are sent to hospitals. Compensation for injuries to the enrolled personnel as well as the supervisory and facilitating personnel of the technical agencies is provided under the rules of the United States Compensation Commission. In order to minimize accidents, a safety committee has been formed in each camp. This committee consists of the army officer in command of the camp, the doctor, and the superintendent in charge of the work activities. Safety regulations have been issued to this committee, which must be enforced in each camp. The committee has also received pamphlets and safety hints from the ECW Safety Division which has organized a central committee in Washington for all the CCC camps in the country. Group meetings are held regularly in which the prevention of accidents by removing and providing against both physical and mental hazards are discussed. First aid classes are also a part of the safety program.

Forest protection and improvement

The second purpose of the civilian conservation corps is the advancement of conservation and other public works.

Large areas of forest lands unbroken by roads and fire breaks are a serious fire hazard. It is in such areas that forest fires become conflagrations of unmanageable size, destroying thousands of acres of valuable forest products, game and wild life, homes, farms, and even taking human lives. Fires are, of course, easier and much less expensively controlled if they are attacked when they are small. To do this, forest areas must have sufficient roads for the quick transportation of men and fire fighting equipment, fire breaks, towers for fire detection, and forest telephone lines.

The fire roads constructed must, however, not become part of the regular road system. To allow the public to use these roads and fire breaks would increase rather than decrease the fire hazard, and would also increase the possibilities of game law violation by opening up large areas of previously inaccessible forest areas. Fire roads and breaks must be used for fire fighting purposes only.



Truck trail construction under ECW program.

As state resources were inadequate to carry on the work begun in 1932, it was fortunate, indeed, that this work could be continued on a previously unthought of scale under the federal ECW unemployment relief act. From the beginning of the program, from 8,000 to 12,500 civilian conservation corps men have been at work in Wisconsin forests, preserving and perpetuating them, and preventing and suppressing fires in them. From 4,600 to 5,500 of these men have been at work in state camps doing work under the direction of the conservation department on state and county forests, state parks and game refuges, and on private lands where projects result in a distinct public benefit.

Boys from the State of Wisconsin ECW camps have constructed 1,022 miles of truck trails or fire roads and 154 miles of fire breaks. They have erected 1,150 miles of telephone lines and 31 fire lookout towers, 7,985 acres of forest land have been improved by cultural cutting, and 16,739 acres of new forests have been planted. Fire hazards have been cleared from 751 miles of roads and trails, and from 7,426 acres of forest land.

Ribes eradication

By the eradication of over 5,000,000 wild currant and gooseberry bushes which serve as the alternating host to the white pine blister rust, 30,351 acres of white pine were protected from the ravages of this disease. The civilian conservation corps expended 83,310 man days fighting fires. Had it been necessary for the conservation department to hire this amount of labor at 25 cents per hour, it would have meant a cost to the department and to the various counties of \$166,620.

Stream and lake improvement

The CCC program made it possible for the conservation department to begin an extensive trout stream and lake improvement program it had planned for years to carry out. Under the direction of an expert ecologist, the placing of log wings and other deflectors has



An "A" type log deflector being placed in a stream improvement project.

been started in many of the streams and lakes in the state, and the results are proving very satisfactory. If the habitat of the fish can be improved, the effectiveness of the fish stocking program will be multiplied several times.

Other work projects

Game refuges also have been improved to further the propagation of fish and game. A survey is under way to determine the areas where sub-surface water may be easily reached for combatting fires with high pressure pumps, and large areas of forest land have been surveyed for the preparation of new forest protection maps. Erosion camps have constructed 730 soil saving dams.

A complete table showing work accomplished by the state forest and erosion camps from June, 1933, to the end of October, 1934, will be found in Part II of this report.

Unemployment relief act

The present act providing for the relief of unemployment through emergency conservation work, expires March 31, 1935. Forest work in Wisconsin has unlimited possibilities, and only projects of the highest priority are now being undertaken. It has been well proved that the civilian conservation camps have been a great public benefit both from the social aspect of restoring young men and re-establishing confidence, and from the work accomplished in the interest of conservation. It is felt that the emergency conservation work act should be extended beyond March 31, 1935, to provide for further unemployment relief and the construction of additional protection facilities and improvement projects in our forest areas, and that all possible influence should be exerted to bring about the continuance of this splendid work.

Part I—Section 6

STATE PARKS

Introductory

The State of Wisconsin has long recognized the value to her citizens of areas set aside for outdoor recreation. With the increased leisure time brought about by shorter working hours, and with the vastly improved traveling facilities, the general public is turning more and more to picnicking, camping, and similar wholesome outdoor recreation. Wisconsin state parks, areas of outstanding natural beauty as well as of scientific and historical significance, have kept pace with public demands for this type of area.

History

Wisconsin was the first of the states to take steps to preserve outstanding sites of historic or scenic interest through the establishment of state parks. In 1878, by legislative action, a tract of 50,000 acres in what was then Lincoln county, was set aside as "The State Park." This existed without development of any sort until 1897, when again by legislative act the lands contained within "The State Park" were sold to lumber companies.

In 1899 Governor Edward Scofield appointed a committee to investigate park possibilities in the St. Croix river region in Polk county, and acquisition of lands in this area began in 1900. The same year a park was established there in co-operation with the State of Minnesota which established a contiguous area on the opposite side of the river. The two areas are known as Interstate Park.

In 1907, sentiment for developing a state park system had crystallized to the point where the legislature of that year created the first State Park Board which employed a nationally known landscape architect to make a survey and draft a report to Governor James O. Davidson.

During the next few years two additional parks were acquired— Devil's Lake State Park in Sauk county, and Peninsula State Park in Door county.

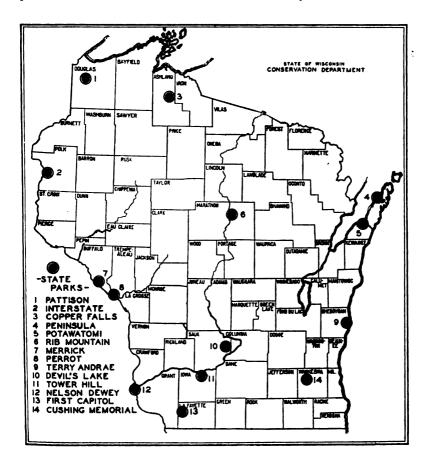
In 1913, one forester and several rangers were directed by the State Board of Forestry to locate and construct roads and trails within the parks, and to prepare maps of the areas.

Two years later, on July 1, 1915, the State Park Board, the State Board of Forestry, the Fisheries Commission, and the State Game Warden Department were consolidated to form the State Conservation Commission, and since that time administration of state park affairs has been under the jurisdiction of this commission.

Establishment

State parks are established to preserve areas of exceptional scenic beauty of state wide significance, to set aside places of historic interest of state wide significance, and to provide recreation grounds. In recent years the object of providing additional recreation grounds has become of paramount importance. The great increase in the amount of travel has caused this greater demand.

Wisconsin now has 14 state parks and three roadside parks, in addition to other state owned lands, whose recreational facilities deserve consideration, principally the state forests. It is the policy in the administration of all parks to preserve the features which make that particular area distinctive, and to retain as much as possible of the natural and primitive conditions while also making the parks accessible and useable in a recreational way.



Attendance

It is estimated that the 1934 attendance at Wisconsin's state parks will exceed one million people. This increased number of visitors and increased use of the state parks, has called for added improvements and facilities such as roads, trails, comfort stations, communication facilities, policing of grounds, safe water supplies, shelters, camp and picnic ground equipment, and increased forest protection. These essentials place a heavy drain on the energies of the personnel and the available funds of the park service.

Policy

It is the aim of the department to constantly improve the service in these primary elements which add to the comfort of the public as well as to increase the facilities for enjoyment and pleasure. Such a policy seems best to serve the business and recreational needs while at the same time preserving the natural features of the parks.

New roadside parks

The present tendency of vacationers to cover long distances by motor and camp trailer, is showing the need for frequent roadside camps. The Wisconsin park system has anticipated this requirement during the biennium by acquiring three such areas, the New Glarus Woods, in Green County; Rocky Arbor, in Juneau and Sauk counties; and Ojibwa park, in Sawyer county. These are beautiful wooded areas through which pass permanent, paved trunk highways. They are ideal resting places where tourists may rest and relax on their journey, where the children play in safety away from the swift traffic of the main roads.

These roadside parks serve the local communities as centers of outdoor recreation, and are much used for family or community picnics. Many more of these roadside parks are needed, and should be added from time to time.

Nature guide service

In July, 1934, a nature guide service was inaugurated at Devil's Lake State Park. This park is famous for its variety of natural beauties and phenomena of scientific interest. The guide made regular trips over the bluffs daily except Monday, explaining the formation of the bluffs and the lake. He called attention to the great variety of plant and animal life along the trails, pointed out the value of forests, and explained the need for forest protection and other conservation measures.

Attendance on these conducted hikes increased steadily throughout the season, and a genuine interest was evidenced by the large number of questions asked by visitors. Frequently the groups numbered 50 or 60 men, women and children, and the hikes lasted four and five hours because of the interest shown by the hikers. This service meets a real need in furthering the intelligent use of leisure time, and will be expanded in the future as funds permit.

Roads and improvements

Improvement and extension of the park road systems was continued during the biennium. Approximately four miles of road to the south end of Devil's lake were graded, graveled, and oiled, making available a large area for camping. The Skyline road at Peninsula State Park, and the Loop road at Potawatomi were finished. The latter completes a comprehensive scenic circuit and makes all areas of the park accessible. Minor roads were graded in Merrick and Nelson Dewey State Parks. The general policy of improving the surface of existing roads in all state parks was also continued, resulting in increased comfort and safety for park visitors.

Trails and lookout shelters

Increased interest on the part of park visitors in hiking and nature study, has made necessary additions and extensions to the trail systems. At Rib Mountain about a mile of new trails has been opened to make available some of the more interesting views. Two rustic "lookout shelters" of most pleasing design, and several substantial rustic benches were constructed which add greatly to the comfort of sightseers. It is planned to extend the use of these rustic structures to other parks.

At Devil's Lake State Park the long established trails were repaired and relocated to handle the increasing numbers of hikers. The famously difficult south end of the East Bluff trail was made a typical mountain trail, and now permits safe ascent or descent. New spur trails on the West Bluff, and new extensions on the East Bluff totaling about three miles, now make available most of the oustanding scenic features of the park.

Copper Falls State Park has about two miles of new trails including approximately 250 cedar steps. These important improvements, together with the new lower bridge, make it possible for the hiker to complete a circuit of the scenic attractions of these unique gorges and waterfalls.

Bathing and swimming

Water sports have claimed their share of attention in the park service during the past two years. At Pattison State Park where an artificial lake was created, a sand beach was built and a permanent line of safety posts erected. Plans are now under way for a suitable bathhouse to meet the rapidly growing needs of this recreation center. Judging by the great crowds using this swimming beach, it fills a long felt need for the northwest corner of the state.

At Terry Andrae State Park the facilities of that exceptionally fine natural beach were greatly augmented and improved by the construction of a bathhouse. Diving rafts have been maintained at Peninsula and Potawatomi State Parks.



The new lake at Pattison State Park.

The exceptionally low water at Devil's lake made an opportunity for work on both beaches. All stones were carefully raked from the sand and all weeds were removed so that with the return of normal water levels, these beaches will be among the finest in the state.

Equipment and facilities

With increasing crowds in all the parks, much attention has naturally been directed to the improvement of sanitary facilities and drinking water supplies. New wells were drilled at Rocky Arbor and New Glarus Woods roadside parks, providing an abundant supply of pure drinking water. New comfort stations of modern design were built at Devil's Lake, Tower Hill, Merrick, and Nelson Dewey State Parks, and at Rocky Arbor and New Glarus Woods roadside parks.

Additional equipment to facilitate the maintenance of the parks was added wherever essential to augment service to the public.

Woods culture and fire hazard reduction

Extensive planting of forest trees was conducted at Rib Mountain, Copper Falls, Peninsula, and Terry Andrae State Parks. This work will greatly add to the attractiveness of the parks in a few years. In several parks extensive culture work was done along trails and in areas frequented by the public.

Several hundred acres of wooded sections in all parks were cleared of dead and down timber. Particular emphasis was paid to this type



Picnic grounds at Tower Hill State Park.

of improvement along trails, with the result that the fire hazard in the more frequently visited areas has been greatly reduced.

CCC and CWA activities

The extensive work of maintenance and improvement in all state parks was made possible during the past two years through the co-operation of the CCC and CWA organizations. These groups were especially valuable to the park service in reducing fire hazards in all wooded areas, and in aggressively fighting those fires which did break out. The extended program of trail construction was largely due to the assistance of these organizations.

Expanded activities

It is quite apparent from the foregoing that if these areas are to continue to function creditably to an ever increasing patronage, that the essential facilities will have to be kept in adequate condition and in many cases expanded. It is also to be noted that following previous policies of opening at least two new park areas during each biennium, provisions should be made for the continuation of this program. The growing public feeling that the state should provide reasonably sized roadside parks such as the three opened during the biennium, indicates that several more of these will be acquired and put in condition for public use.

Part I—Section 7

FISHERIES

Introductory

The value of fisheries work was recognized by Wisconsin before any other phase of conservation work. The first fish commission was appointed in 1874, and the first state fish hatchery was constructed at Madison in 1875. Because of this early start and a continually expanding program, Wisconsin has maintained good fishing even though the numbers of fishermen have greatly increased.

As pioneers in fisheries work, constantly seeking new and better methods, Wisconsin fisheries have developed methods and equipment which are today of outstanding importance to fish culture both within and outside the state.

Policy

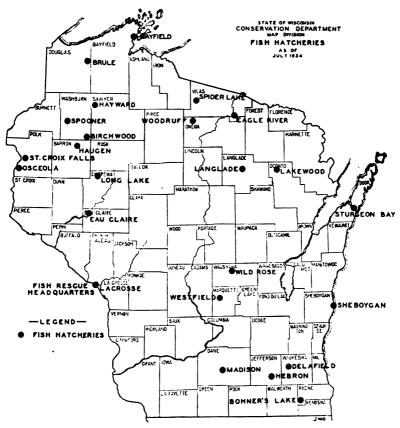
One of the greatest handicaps to the entire fisheries program has been its lack of balance. Here as elsewhere, practically all effort and money have been expended on the production of fish, and very little put forth toward the protection or restoration of feeding, hiding or nesting places in their habitat. The present policy has been expanded insofar as possible to include the protection and restoration of natural conditions in our waters, but in no sense has propagation been neglected, rather its work has simply been supplemented by the other equally important phase of the program.

Under this policy, studies are continually being made in fish food surveys in various Wisconsin waters; also, all actual planting of fish is now supervised by conservation department men. Additional surveys have and are being made in stream and lake pollution and in the control of rough fish.

The conservation department works in conjunction with and furnishes all possible co-operation to the State Committee on Water Pollution, which is working out means for control and disposal of sewage and commercial waste which pollutes state streams and lakes.

Drouth conditions

Conditions during the last biennium have been the most severe on all natural and artificial reproduction of fish of any in the history of the state operations. These two years were even drier with less rainfall and more hot weather during the summers than at any time in the last 30 years. Many streams dried up, and the lakes reached



the lowest levels that they had in many years. At no time in the past have natural conditions been so severe on the survival of trout in our streams and all kinds of lake fish in our lakes as it has in the last two years. It has been a noticeable fact at all of the fish hatcheries, that the usual large supply of cool spring water has been much diminished during this biennium. This condition was especially noticeable at the hatcheries where artesian wells supply the water. The lake that supplies water to one of the bass hatcheries was so low that no water ran into the bass ponds for six weeks, and before the pond could be drawn down and the fish distributed, a spring water supply had to be developed to supply water to the pond.

The Mississippi river is our best barometer on low water and it was true to its reputation again in 1934 as it went to such a low level that the rescuing of fish from the overflowed lands was practically a failure. Only a few thousand fish were secured whereas usually millions are rescued.

Activities

The usual success in rearing and handling trout was experienced at the trout hatcheries. The wall-eyed pike work at nearly all the hatcheries was very satisfactory in the 1933 season, although not as successful in 1934. During the egg collecting season the weather suddenly turned very hot, causing much loss to the eggs collected. The muskie season was the best this year that has ever been experienced.



Loading eggs for shipment to hatchery.

The bass production in the last two years has been fluctuated by several reasons. In 1933, the season was about normal at the hatcheries, and in the rescue work; but in 1934, it was increased at Delafield by CWA work which was done on the ponds, but at the other hatcheries, Woodruff and Burlington, and in the rescue work, it was much reduced on account of the very hot weather and low water.

All the fish hatched, rescued and transferred, were planted as evenly as possible through the different counties in proportion to the lakes and streams in them, some counties receiving more lake fish and some of them more stream fish as the county waters were adapted for them.

Complete tables of fish production and distribution will be found in Part II.



Proper method of planting wall-eyed pike.

Muskellunge propagation

As time goes on, the muskie fishing in Wisconsin shows a marked improvement both in the fish caught and in the interest shown in this, the greatest fishing sport in North America. The Wisconsin fisheries division is helping to continue this condition in Wisconsin to its fullest extent by carrying on a muskie propagation program unequalled in any other state in the Union.

By the addition of a hatchery at Island Lake in the northwestern part of the state in 1934, to augment the output of the Woodruff hatchery, it was possible to hatch and plant 4,000,000 muskie fry during 1934. That was more than the state ever planted before in any one year since the work began in 1897. Never before was it possible to catch for breeding purposes so many adult fish as were caught in 1934. All of the 4,000,000 muskie fry were planted in the northern part of the state in waters well adapted for them.

For many years efforts have been made to rear these fish as trout are being reared, to a larger size before they are planted, but without much success. All of these efforts were carried on with no real study by a scientist of the kinds of food they would or would not eat, or a careful study of their habits and needs. In the season of 1934, an expert on fish feeding was employed in an endeavor to solve the mystery of feeding this most important of our inland fish. While

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some advance was made in rearing the muskies this year, it was only a step toward the solution of the problem.

A more extensive propagation and rearing program will be followed each year until it is possible to rear these fish as easily as trout are now being reared.

Trout propagation

The propagation and rearing of trout was slightly increased during the biennium. The rearing program was especially stressed although greatly handicapped by lack of finances. Continuing the previous policy, no trout were planted when less than fingerling size, and a considerable number of yearling, two year old, and adult trout were planted. The intensive stocking of adult fish in certain of the larger trout streams is part of the department's experimental program in an effort to restore the trout in those streams.

The co-operative rearing of trout by sportsmen's clubs and the state was also continued during the biennium.

Great Lakes commercial fishing

Because of the action by the legislature to curtail the propagation of lake trout on Lake Michigan and Green Bay, it was necessary to cut down on the work of spawn taking. Accordingly, permits to set nets during the spawning season were awarded to only one half the number of men who had had them in the past. The work was not started in 1933 until about November 1. In the past it was begun at least a week or 10 days sooner. This cut the output about in half.

In the 1934 season, a new plan of collecting lake trout spawn on Lake Michigan was put into practice, and the issuance of the permits to do the work was made one week earlier than in 1933, beginning October 25 and continuing through November 15. Ten permits were issued from Manitowoc to Milwaukee, and fourteen permits were issued from Sturgeon Bay to Washington Island. Each fisherman was required to have a state appointed inspector on board his boat to see that the eggs were taken properly, and that reports were made on the work. A salary of \$3 per day, and board, was paid to the inspectors by the fishermen.

Owing to the alarming decrease in the amount of all kinds of fish obtained by Wisconsin commercial fishermen, and because fish are one of the state's most valuable natural resources, ways and means have been undertaken from time to time to protect and perpetuate them. In the past the general trend has been to allow the use of smaller sized mesh nets whenever the output was reduced to the point that the larger sized mesh nets would not catch fish enough to satisfy the fisherman. This practice has been followed in Wisconsin until the supply has been so depleted that the commercial fisheries business has become unprofitable in many fishing ports in the state.

The only way this can be remedied will be to raise the size of the mesh of all nets used, to one which will catch only mature fish which have had at least one season to reproduce. In order to accomplish this, the conservation commission has appointed a committee of 10 men, four from the conservation department, one from the Izaak Walton League, and five fishermen, one from Lake Superior and four from Green Bay and Lake Michigan, to prepare recommendations for revising the present commercial fishing laws of the state. Therefore, there will be presented to the 1935 session of the legislature a completely revised commercial fisheries law which will be along conservation lines, and, if adopted, will be a big step toward restoring this most valuable natural resource.

During the season of 1934, the first chub eggs ever hatched and planted were handled out of the Sheboygan hatchery and planted at Port Washington. The lake trout hatched at Sheboygan were planted on the spawning reefs out of all the ports and fishing places from Kenosha to Manitowoc; the lake trout from Sturgeon Bay were planted in Lake Michigan and Green Bay from Sturgeon Bay to Washington Island. All the lake trout hatched at the Bayfield hatchery were planted in Lake Superior.

Smelt

The smelt is a new species of fish found in Lake Michigan and Green Bay having been present in quantities for only the last four years. It is a small round fish and at the age of four years reaches the weight of only a few ounces.

During its spawning period which occurs early in the spring it comes into rivers and streams running into Green Bay and Lake Michigan in enormous numbers and is very easily taken with dip nets dropped to the bottom through a hole in the ice. Hundreds of tons of them are taken during that period. It is an excellent food fish, and so far investigation has not shown that it is to any great extent cannibalistic.

Mississippi river fishing

In the past it has been practically impossible to get uniform regulations on border waters like the Mississippi river, Lake Pepin and St. Croix river, but during the last biennium a most important cooperative law was enacted by the States of Wisconsin and Minnesota regarding the commercial and hook and line fishing. These regulations will tend to greatly improve both kinds of fishing, but more especially the hook and line fishing which is furnishing thousands of people in the state and also thousands of people who come into the state from other states, with excellent hook and line fishing.

The co-operative laws between the states now make it possible for people to fish in both sides of the rivers with a license from either state or, in other words, a hook and line fisherman or a commercial fisherman under the present plan has the same privileges on both sides of the rivers. All commercial fishermen are supplied with wardens appointed by the states to supervise their fisheries operations. The same open and closed seasons apply to these waters in both states.

These measures will be of great benefit in enforcing the laws, and also in the protection to all kinds of aquatic life in the waters.

Sturgeon planting

To broaden the distribution of the fast disappearing common lake sturgeon, plants of this fish were made in 1934 in Lake Mendota in Dane county, and in the Chain of Lakes at Waupaca in Waupaca county. These were adult fish, both male and female, taken from the waters of Lake Winnebago. It is hoped that from these and other similar plantings which will be made in the future, the state may be able to build up the population of this fine food fish in many of our inland lakes to the point that an open season may be possible.

At the present time the only waters which have this fish in any quantities in Wisconsin are Lake Winnebago and its tributary waters. It is said by old timers that there were so many sturgeon in those waters at one time that they were considered a nuisance by the commercial fisherman as there was no sale for them, and they were piled up on the shores and destroyed.

Muskellunge planting

Another important experiment carried on by the fisheries division during 1934 was the planting of a large consignment of muskellunge, averaging in size from eight to 11 inches, in Lake Mendota in Dane county. At the present time it is not known that muskellunge have been caught as far south in the state as Dane county, but it is believed that Lake Mendota, and in fact many other lakes in the southern part of the state, have every necessary requirement to properly protect and propagate the muskellunge. Other plantings of muskellunge will be made in the future in various southern lakes as the fish are available.

Clam industry

The Mississippi and its immediate tributaries have long been the world's largest source of fresh water mussels. The fresh water mussel furnishes the raw material for the manufacture of pearl buttons, an industry which, while it nowhere nearly approximates the magnitude it did between 1900 and 1915, is still of considerable financial importance to the people of Wisconsin. In addition to the revenue gained from button manufacture, the fresh water mussel also yields occasional pearls and considerable pearl material which finds a ready market. Changed conditions now find more commercial clamming being done in counties within the state, as is shown in the 1933 clamming report in Part II.





Pike hatchery in operation—jars filled with eggs. Water flows through these eggs constantly.

CWA fisheries activities

The work done by the CWA in the fisheries division was of untold value, coming as it did at a time when lack of departmental funds had seriously hampered needed undertakings and improvements.

For 25 years or more the bass ponds at Delafield have been in use, but at no time has there been money enough available to clean them out as they should have been cleaned. By use from year to year, they become filled up with decayed vegetable matter which should be cleaned out each year, making the pond in as new and fresh condition as possible for the next year's work. The CWA program offered just the opportunity needed. At one time there were 154 men working at that hatchery, and as a result, four of the ponds were put in better shape for fish propagation than they have been for many years. With the expected results from such work, more large mouth black bass and crappies, bluegills and sunfish were planted in 1934 from that hatchery than ever before. The money expended was more than justified by this one year's hatch of fish.

In another very necessary CWA program, a pipe line was installed to supply spring water to the large rearing house at the trout hatchery at Osceola, and one to increase the spring water supply to the St. Croix Falls hatchery, both projects of the utmost im-

portance. There were also projects at Wild Rose and Woodruff hatcheries which enabled the conservation department to do more efficient fish propagation work at those stations.

Fish refuges

Fish refuges are established to protect game fish on their natural spawning and rearing grounds. There are two kinds of fish refuges, those established in streams and those established in lakes. The majority of refuges established in streams are for the protection of trout and are mainly established on the small feeder creeks to trout streams, where the young fish may stay until they are large enough to venture into the main streams. These refuges are established for a period of at least two years, but more generally for longer periods of time so that the fish may have a fair chance to reproduce themselves and work down into the larger streams. Refuges are also established in the larger rivers to protect fish in places where they gather and stay for long periods of time, such as below dams. These refuges do much to protect the fish from being caught, which is generally an easy matter in such places.

The fish refuges established in lakes are mainly for the protection of bass; however, refuges have been established to protect other species of pan fish during their spawning period. Refuges of this nature are established on known spawning grounds. These refuges are seasonal and remain in effect just during the spawning period extending to July 1 each year. In some instances, when a lake has been depleted of fish to a great extent, the entire lake is declared a fish refuge for a period of two or more years so that the fish in their natural way, will reproduce themselves and under normal conditions replenish the fishing waters.

At the present time there are 265 fish refuge areas established in 51 counties throughout the state. Of these refuge areas, five are established below dams in the larger rivers, and 20 are established in lakes, ponds, and thoroughfares.

Removal of rough fish in inland waters

This work is arranged under two plans, the removal of carp and buffalo in the southern waters, and the removal of suckers in the northern waters. The removal of carp and buffalo from southern waters has been carried on for many years and has developed into an industry employing a great many men.

During all these years many different methods have been used, but the best results are obtained by the use of seines. Contracts have been issued to expert rough fishermen to remove these fish under certain restrictions and state supervision. Millions of pounds of these fish have been taken out of Wisconsin waters and sold for human consumption in New York and Philadelphia. The state has received a percentage of the income derived from the sale of these fish. On July 1, 1934, a new division, known as the division of commercial fishing, was created. A superintendent was appointed who was to devote his entire time to an intensive program to rid the waters of these undesirable fish.

In the northern lakes game fish have been taken out by the thousands each year, but the production of rough fish such as suckers has not been disturbed at all for years. During a short period there was an appropriation made to carry on this work, and hundreds of thousands of these fish were caught in the spring and given away for food to whoever would come for them. However, the rough fish removal appropriation has not been available for several years, and the only work being done in the northern waters at the present time is during the collection of pike eggs. This, however, is not at all effective as only a very small percentage of the suckers in a lake come onto the pike spawning beds. To do the work properly and effectively these fish should be taken out during the time they spawn. In a few lakes, where the work was done at the spawning time, remarkable results were accomplished.

Expanded program

In the 60 years that this branch of the conservation department has been in existence, the work always has been carried on under the handicap of insufficient funds. If this work is to continue and in any measure keep pace with the demands put upon the lakes and streams for more, and still more fish, it is imperative that there be a great expansion of all phases of fisheries work.

No state in the Union has finer lakes and streams than Wisconsin, and no state has a better variety of kinds and species of fish in its waters. The lakes and streams of Wisconsin attract thousands of people to them each year, and these numbers can be maintained and vastly increased if every lake and stream has sufficient fish life in it to promise each fisherman a likely catch. If the fisheries program is not expanded to meet the growing demand which cheaper automobile travel and the trend toward shorter working hours has made, Wisconsin will find its waters depleted of fish faster than natural reproduction can stock them.

It will be necessary in the next biennium to increase the scope of the fisheries division at least three times, in order to maintain Wisconsin in her rightful place as one of the foremost and finest game and commercial fishing areas in North America. This increase will not be uniform in all lines of fisheries activities; rather, special emphasis will be laid upon certain phases of the program such as pan fish, muskie, and lake fish propagation, and rescue and transfer lines of work.

Part I—Section 8

GAME

Introductory

The division of game, created by the conservation commission in 1928, met with ardent public approval and support. Although the game policy has merely started in the past five years, exceptional progress has been made during the biennium. The general public and sportsmen in particular, must realize however, that if Wisconsin is to hold its place among the foremost game states, many of whom have been practicing game management for years, the conservation department must have public support and co-operation to a complicated and all-comprehensive program. This program has to do not only with the production, distribution and protection of native and exotic species of game, but also the protection, management, and in many cases the restoration of habitat. It is in every regard a well rounded, balanced program.

Under the present administration, the projects of the game division include general game administration; state game farms and stocking program; experimental fur farm; responsibility for the recommendation of game regulations; game and wild life refuge program; co-operative projects including federal, state, and educational institutions; fur bearing animal surveys; game food and cover restoration; winter feeding; public hunting grounds; commercial game farms, deer farms, and fur farms; licensed shooting preserves; deer and beaver damage complaints and claims; game and trapping census reports; game research and miscellaneous game projects.

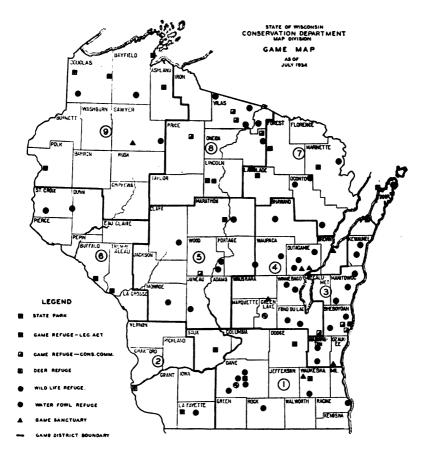
General game administration

The administration of the game division includes the correlating of all game projects toward a definite objective. The public at large, in the consideration of its own local problems, is often apt to forget or lose sight of the fact that there is a certain general aim toward which all efforts in the bettering of game conditions must be directed. Probably the greatest problem of the division is the uniting of all phases of game management into a plan which is satisfactory to the people of the state as a whole.

State game farms and stocking program

The pheasant egg and pheasant distribution of the state game farms during 1932 and 1933, will be found in Part II of this report. The final figures for the 1934 distribution are not yet completed.

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Game farm location

Due to inaccessibility, climatic conditions, and overhead costs, the Fish Creek game farm, located in Door county, was dismantled and all equipment moved in the spring of 1934, to a new site of 115 acres located one mile east of the village of Poynette in Columbia county. The Waupun farm, run as an auxiliary farm in conjunction with the Fish Creek farm, has likewise been dismantled and the equipment moved to Poynette.

The new site at Poynette combines all the requirements necessary to a production and experimental game farm. The dismantling of the Fish Creek and Waupun game farms, the transportation of equipment to the new location at Poynette, and necessary construction, erection of equipment and other work essential to the establishment of a new game farm, has been done with the aid of some CWA and FERA labor. At the same time, the regular egg distribution, rearing and stocking programs have been maintained.

During the next biennium, the Moon Lake Game Farm at Kewaskum will specialize entirely on the hand rearing of Hungarian and Chukar partridge for stocking purposes.

Experimental fur farm

Construction began late in the biennium on the experimental fur farm at Poynette adjoining the state game farm at that site. A modern fur plant, including laboratory, is planned.

The purposes of the fur farm are twofold:

- (1) to produce annually for stocking from 500 to 1,000 raccoon and from 25 to 50 silver and blue foxes for experimental stocking purposes.
- (2) to carry on experimental work at the farm which will consist principally in the attempted breeding and rearing of the rarer fur bearing animals such as fisher, marten, and otter. Mink will be given special studies in nutrition, housing, and breeding. Some experimental work will be done with fitch. It is hoped to add a herd of karakul sheep to the fur section in the next biennium, together with an experimental project in the production of white tailed deer from an economic standpoint.

The fur farm laboratory, which is one of the finest in the central west, will be invaluable not only to the fur farmers of the state, but to the state game farm and to the commercial game breeders. It will serve in addition as a clearing house for all wild dead game shipped in for analysis, particularly those species whose death is caused by cyclic disturbances.

Present breeding stock at the farm includes 150 black, gray, and cross raccoon; four pairs of silver fox; three pairs of blue fox; two pairs of red fox; one pair of fisher; three pairs of fitch; and one pair of nutria.

Game regulations

The 1933 legislature, in the passing of Chapter 152-S, which became Section 29.174, Wisconsin Statutes, transferred the responsibility for all game seasons, including those on fur bearing animals, to the Wisconsin Conservation Commission. In preparing recommendations to the commission, the conservation department is assisted by 71 advisory game committees, elected by the sportsmen of each of the 71 counties, and by each conservation warden. The state has been divided into nine game districts with a conservation warden acting as district game supervisor of each district.

After a series of special meetings and hearings with each county game committee, their recommendations and those of the conservation wardens are checked with all available departmental information, proposed regulations are drafted for the entire state and submitted to the conservation commission. The particular value of this method of determining game seasons, lies in the fact that the individual requirements of each county may be given particular attention and consideration.

Game refuge program

In 1932, 1933, and 1934, the entire state game refuge program has been revised. A refuge inspector was appointed whose particular duty is to supervise a management system on each refuge in order to secure proper enforcement, more favorable environment, and greater natural propagation.

Cover improvements have been made on many areas. As they have been needed, food patches have been planted adjacent to cover improvements.

Due to a supreme court decision in June, 1934, requiring that all refuges must have the written consent of individual landowners, eight legislatively established refuges and four refuges established by conservation commission action, have been rescinded. These areas will be reorganized during the next biennium under the new management plan. A map and table showing the location and names of the refuges will be found in Part II of this report.

Of particular interest to sportsmen of the state is the establishment of a series of new deer refuges in northern counties. A map and table giving the location and names of these refuges are given in Part II of this report.

All other wild life and game refuges, waterfowl refuges, and sanctuaries now effective, are also shown in Part II.

Co-operative game projects

Principal co-operative projects during the biennium include: (1) co-operation with the University of Minnesota in the study of cyclic fluctuations of grouse, hares, and rabbits; (2) co-operation with the University of Wisconsin in the establishment and maintenance of game management demonstration areas; (3) co-operation with the United States government in making comprehensive surveys of approximately 50 areas from which several will be selected in the federal waterfowl nesting area plan; (4) a co-operative project in conjunction with Jackson, Juneau, Monroe, and Wood counties, and the federal government, in the development and management of approximately 125,000 acres of drained land.

The conservation department is continuing its experimental work in the planting of aquatic plants for food and cover. Approximately 2,000 pounds of aquatic plants and seeds were distributed by the department during the biennium.

Fur bearing animal surveys

The Wisconsin muskrat crop is at a dangerously low point. Surveys to be continued during the next biennium on the entire state muskrat situation, will enable the department to establish a series of fur bearing animal refuges and sanctuaries to assist in the restoration of water levels, in food and cover restoration, and in re-stocking.

Game food and cover restoration

A considerable number of experimental projects in game food and cover restoration have been carried on during the biennium with the University of Wisconsin. Projects have dealt principally with pheasant, Hungarian partridge, bobwhite quail, and cottontail rabbit.

Winter feeding

Estimated organized winter feeding stations for the winters of 1932 and 1933 average 4,000. The winter feeding budget of the biennium continues at approximately \$5,000. Feeding operations are



Model Wisconsin lean-to hopper winter feeding station.

carried on particularly for the benefit of sharp-tailed grouse, prairie chicken, Hungarian partridge, and bobwhite quail. Approximately 10,000 winter feeding bulletins were distributed in 1932 and 1933 to Wisconsin sportsmen and farmers.

Of particular interest to the Wisconsin public are the winter feeding contests established and maintained by the game division during the two winters of the biennium. The tabulation of the winners of the two contests is given in Part II.

Public hunting grounds

Although funds were not available for the mapping of the many thousands of square miles of Wisconsin public hunting grounds, the great majority of which are owned by the federal government, by the state, or by counties, plans have been suggested for the distribution of maps to sportsmen outlining blocks of lands in all counties, totaling one half section or more. Under existing financial arrangements, it is impracticable for the game division to attempt to purchase or lease public hunting grounds in central or southern counties.

Commercial farms

Commercial game bird farms have decreased in number from 132 in 1932, to 105 in 1934. These vary in size from one half acre to approximately 40 acres. The principal game birds reared on commercial game farms continues to be the English ring-neck, Mongolian, and Mutant pheasants. Twenty five per cent of the breeders propagate ornamental pheasants of various varieties. About 30 per cent of the breeders deal in wild ducks and wild geese.

Commercial deer farms have decreased from 25 in 1923, to 23 in 1934.

Private fur farms have been established in Wisconsin since 1923. There were five licenses issued in that year, and this number gradually increased until in 1930, 2,230 fur farm licenses were issued to Wisconsin fur farmers. These decreased in 1932, to 1,021 and in 1934, to 840.

Licensed shooting preserves

The five licensed shooting preserves established in Wisconsin in 1931, have increased to 40 preserves in 1934, totaling 36,792 acres.

During the 1933-1934 season, 7,169 pheasants were stocked on preserves, with a total of 2,186 birds shot.

Of interest is the fact that there were 131 food stations in effect on shooting preserves during the past winter. Partially due to these stations, the bobwhite quail crop has trebled on many areas. Except in a few instances, general public reaction still appears to be favorable toward the slow development of the shooting preserve system.

Complaints and claims

Beaver complaints continue to be one of the department's major problems. Early in 1934, the beaver control program was reorganized and a larger staff of trappers added, with a consequent increased efficiency in control methods.

Deer damage claims of \$5,854.65 were paid during the biennium. The use of creosote rolls, particularly in gardens and on small fields, has met with nominal success. It is expected that the increased use of these rolls will reduce the damage claims for the coming year.

Game census reports

The census reports of the game kill in Wisconsin for 1932 and 1933 make it possible for the public to understand the value of an estimate on the game taken in Wisconsin each year. Information furnished by individual counties on the kill of pheasants, Hungarian partridge, and quail is of great assistance to the conservation de-

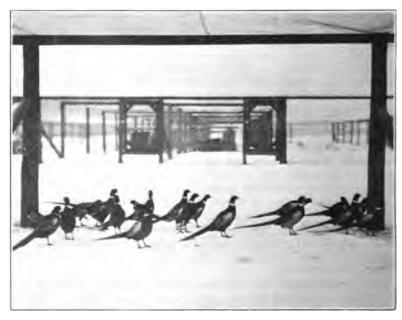
partment in making its recommendations on the length and bag limit of hunting seasons for these game species. See tabulations in Part II.

The trapping report for 1931-1932 and 1932-1933 is shown in Part II of this report. The 1934 tabulation will not be available for publication until December, 1934.

Game research

Additional information has been secured by the prairie chicken and sharp-tailed grouse study of 1933. Some information relative to the mortality rate in birds, migration, cover requirements, all year food requirements, and the effect of predatory animals have been added to statistics already secured.

The majority of research work for the biennium has been carried on at the state game farms, and has dealt principally with the securing of facts on new methods of breeding, feeding and rearing both native and exotic upland game birds. A considerable number of experiments have been carried on with the rarer pheasants and partridge, including such birds as the Versicolor, Reeves, Melanotus, Swinhoe, and Impeyan pheasants, Valley, Hungarian, and Chukar partridge. Additional work was accomplished in the production of pure and cross bred bantams for brooding purposes.



A portion of the 2,000 pure Mongolian pheasant breeders being held at the Poynette State Game Farm.

Miscellaneous game projects

Miscellaneous game projects for the biennium included the experimental stocking of Valley and Chukar partridge, and Mutant, Versicolor, and Reeves pheasants. The stocking of wild turkeys has been discontinued for the present. The division will, with the end of the 1934 season, likewise discontinue the stocking of mallard ducks, at least temporarily.

Approximately 6,000 snowshoe hares were taken by special permit to private trappers in 1933, the majority of which were shipped to the State of New York for restocking purposes. Animals were taken only in those areas where they were destructive. The waterfowl food survey of Wisconsin duck lakes is still being carried on by the refuge section.

Expanded program

The game division, although a comparative newcomer to the ranks of the conservation department, is endeavoring to meet the abundant opportunities that Wisconsin's woodland and wild lands offer in the field of game management. The game program submitted for the next biennium is a complete and practical plan, one that will pay an exceptionally high rate of interest on the money expended, both from the economic, and from the aesthetic and the social aspects. It is based upon research in food, cover, predators, and environment relating to game.

The people of Wisconsin do not as yet fully realize the possibilities of their game resources under a comprehensive, practical management program. Present census reports indicate that the annual Wisconsin game kill exceeds that of any other state. In 1931, 1932, and 1933, census tabulations alone show that between four and one half and six million pieces of game were legally killed each year. The food value alone of this kill is estimated at two million dollars. The unlimited possibilities of an expanded propagation program can best be illustrated by the progress of the pheasant program. In 1930, the second year of the state's stocking policy, there was no open season and no birds legally taken. Yet, in 1933, a short open season in 35 counties resulted in a kill of approximately 150,000 cock birds, valued at more than a quarter of a million dollars at current market prices.

Under a proper program, there are untold possibilities to expand in the entire game field, including all of the upland game birds such as grouse, partridge, and quail, migratory waterfowl, and the upland game animals from rabbits and squirrels to deer and bear.

The fur bearing animal resources of Wisconsin, with the exception of one or two species, are at a critically low ebb. Immediate steps must be taken, surveys must be made, and necessary regulations put in effect in specific localities to bring these animals back to their proper place in Wisconsin's game and wild life program. There is no more important item in the entire game budget than the develop-

ment of the fur situation in this state from the purely economic standpoint.

The experimental fur farm will eventually mean a great deal not only to the present fur farmers and trappers of Wisconsin, but to all citizens who are interested in any commercial development of our natural resources. Fur farming and landowners' breeding of stock for pelts and carcasses for food, offer a new and undeveloped field for employment and profit.

In every section of the state there are varying areas of unpopulated and unimproved land, particularly suitable to supporting a wide and varied wild life. Within a night's ride by train, or a day's travel by automobile of this ideal hunting ground, live 20,000,000 people. Consequently, the possibilities for development which are to be found in Wisconsin's game program, are unlimited.

Part I—Section 9

LAW ENFORCEMENT

Introductory

The policy and purpose of the law enforcement division of the conservation department is twofold. Its first responsibility of protecting the fish and game of the state is apparent; however, it is also responsible for protecting the legal privilege of the state to collect a fee or fees for the right to take game.

Differing from medieval and ancient times when all wild things belonged to he who killed or captured them, our modern legal structure provides that ownership of all things, wild by nature, rests with the state. Pursuant to this changed ownership, the state, under modern conservation laws, regulates how, when and by whom fish and game may be taken. For the privilege of taking game, which is state property, the state charges a regular legal fee or license. The law enforcement division then becomes an agency of constructive value in the conservation program. Without it, few funds would be derived from license sales while bag limits and closed seasons would mean little or nothing. Propagation and stocking programs would be almost discontinued without the revenue provided by license fees.

Conservation law enforcement therefore, assumes a role of vital necessity in the protection and production of fish and game. Whether considered from the point of view of its food value, its attraction to tourist trade, or from its aesthetic worth, the total value of Wisconsin's fish and game is too great to be estimated.

History

Provision for the enforcement of conservation laws was first made in 1887, when the legislature created offices for four game wardens. The same year the law provided for the appointment of three citizens to act as fish wardens. Four years later these offices were dissolved and all authority vested in a state fish and game warden with the power to appoint deputies in each county. These deputies were paid by fees.

When the State Conservation Commission was established in 1915, it absorbed the office of fish and game warden, and set up the present law enforcement division and policy. At that time the title of the conservation law enforcement officer was changed from game warden to conservation warden. This change of title denotes a definite change of policy, in which each field officer becomes a representative

of the conservation commission in the enforcement of all conservation laws and in the promulgation of conservation doctrines and programs.

Change of enforcement policy

Conservation wardens are selected by competitive examination. In recent years these examinations have been made much more stringent and comprehensive. Law enforcement today takes the form of prevention of violation rather than the punishment of violators, although the latter is by no means neglected as the records will show.

Economic conditions

The problems of law enforcement in recent years have become much more complex as the result of general economic conditions. Unemployment has resulted in vastly increased numbers of hunters and fishermen, and also in many who have gone into our forest areas as "squatters" or shackers in an attempt to live off the country. Many of this latter class are from large cities outside the state, they are most often men who have no conception or concern for conservation and its policies, and they present a very real problem to the conservation department, and especially to the law enforcement division.

Subsequent to these problems brought about by economic conditions, has been an increasing tendency on the part of many courts to extend exceptional elemency to violators because of the depression. Not only has this failed to offer the necessary deterrent to game and fish law violations of this kind, but it has served to make the more vicious or commercial type of violator much more bold in his attempts to capitalize on this misdirected sympathy. This leniency has also tended to dishearten and discourage those ardent conservationists in every community who are of such untold value to not only the conservation warden, but to every phase of the conservation program.

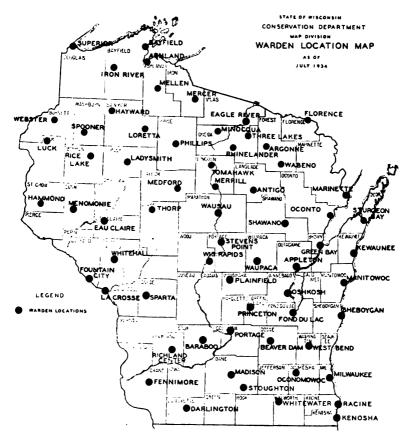
All funds devolving from fines levied upon game law violators are turned into the state school fund. Although the amount of fines has decreased somewhat in recent years, the percentage of convictions to the total number of arrests has remained relatively high, reflecting most favorably upon the judgment and efficiency of the conservation wardens.

Warden award

The Noyes conservation warden efficiency award was conferred upon Conservation Warden Arthur Baie of Marinette during the first year of the biennium, and for 1933 was granted to Conservation Warden Albert Dunham of Oshkosh.

This award, which is given by former Commissioner Haskell Noyes of Milwaukee, is intended to imbue the conservation wardens with a spirit of friendly competition among themselves. The win-

ning warden each year receives a gold watch and has his name engraved upon a silver plaque which hangs in the Madison office. The winning warden each year is selected upon the efficiency with which he conducts his cases and seizures, his citizenship and general appearance, his co-operation with other divisions, his care in making reports and answering inquiries, and upon any unusual and additional service rendered to the department or to the public.



Expansion of activities

Wisconsin possesses all the requisites that go to make up an ideal year round playground, and thousands of non-residents as well as residents annually fish the lakes and streams and hunt the game to be found in this state. As a result, Wisconsin's annual tourist trade reaches untold proportions and if the state is to retain or increase that trade, as well as to maintain hunting and fishing conditions of considerable economic importance to residents, a careful policy of game protection and propagation must be maintained. Strict regu-

lations prohibiting the killing or taking of the different species of fish and game are necessary. The enforcement of the regulations is delegated to a group of 68 men especially adapted and trained for this work.

These 68 conservation wardens are expected to enforce the conservation laws throughout an area of more than 56,000 square miles. This includes the southern counties of the state where thousands of hunters take to the fields particularly during the short season for upland game birds, as well as the northern counties where there are hundreds of miles of backwoods roads that are frequented by hunters at all times of the year, and thousands of miles of streams and lake shores to be patrolled, in addition to commercial fishermen to be supervised on outlying waters. The duties of a warden require that he spend as much time on night patrol as on daytime work in most of the counties of the north, for deer shining, illegal trapping, and fishing are among the most serious of the violations requiring the attention of a warden.

An increased force is necessary if the warden division is to keep pace with the other branches of the conservation department. The inauguration of a winter feeding program for feeding game birds has added a great deal to the duties of the wardens. If this important work is to be carried on effectively, the warden's work during the winter months will be doubled. This is caused by the necessity of establishing and caring for feeding stations and the additional travel necessary to protect the pheasant crop during the closed season. Many arrests are made for the shooting of pheasants during the closed season, and a great many complaints are received requesting that a warden patrol certain areas in which birds are reported being killed.

Lack of personnel prevents the conservation department from complying with all requests, unless a warden may be immediately assigned to work on such complaints. Efforts are wasted by investigating several days after the violations have occurred. In many cases the lack of personnel requires that a warden be detailed to investigate such complaints of violations which are occurring 35 or 40 miles from his home station.

The new plan of fish distribution will require a considerable amount of the warden's time, and best results would be obtained if the area supervised by him could be reduced. It would give the warden an opportunity to form closer contacts with the public than may be obtained at present.

The wardens co-operate with other state departments by investigating complaints, submitting reports, obtaining samples, and giving all other possible assistance. They also furnish all possible help to the forestry and fisheries divisions of the conservation department. Additional men would mean better forest protection as well as better game protection.

A minimum of 25 additional wardens is required to carry out this plan. This number should be supplemented by at least 35 extra wardens during the spring and fall of each year. Spearing, netting, and set lines for fish, and illegal trapping in the spring require an unusual amount of night work to curb. Hunting and trapping violations occurring in the fall, mostly during the months of October and November, give the regular conservation warden far more work than he can attend to properly without assistance. It means that without seasonal assistance, the regular warden must allow some of the complaints to go unattended to if he has several complaints at one time, and he is frequently faced with such a problem.

It is a waste of effort to stock game and fish and then fail to provide adequate protection during the closed seasons. During the deer seasons approximately 70,000 deer hunters are in the woods. At the close of the season many complaints are received by the conservation department that does and fawns are killed in large numbers. Approximately 100 wardens are expected to enforce the law during the short period which constitutes the open deer season. It can be readily seen that it would be impossible for this small force of men to provide adequate protection during the short open season.

Such a program is essential if we are to meet the demands and keep faith with the conservation minded citizens of Wisconsin.

Part I-Section 10

PUBLIC RELATIONS

Introductory

When the division of public relations, then called the division of education and publications, was started July 1, 1928, it was the first distinct agency of its sort in any conservation department. Since that time many other states have organized similar agencies.

From the first there have been two primary objectives before the division—education of Wisconsin citizens and visitors to the needs of co-operation in the conservation program, and advertising Wisconsin recreational advantages to prospective visitors from outside the state.

Following its first year, which was largely a time of experimentation as to methods and media, the division has been handicapped by lack of personnel and lack of funds. Although a number of activities have been started, none of them has been carried on extensively enough to secure maximum benefit to the department or to the state.

Due to this lack of funds and personnel, no activity could be thorough, rather the surface only has been scratched in the several activities under the province of the division—newspaper and magazine publicity, conservation education in schools and interested organizations, motion picture and still picture photography, fair displays and exhibits, outdoor shows and advertising tours, and public addresses.

The need for additional public relations work in conservation has increased commensurably with the vast expansion in the scope of conservation in the state and in the nation within the last few years. The nation has entered an era in which conservation will be foremost among all public enterprises. There is need of a vast public relations program to keep step with this advance and to inform and educate the public regarding it.

Newspaper publicity

In an effort to reach the largest number of people with the limited funds available, all types of educational media have been taken into consideration. Newspapers and magazines of general circulation are used, lectures and illustrative material reach many organized groups, and educational material is furnished schools. The newspaper field in Wisconsin is thoroughly covered. Daily papers are reached through press associations and special correspondents. The division issues a weekly news release which goes to all weekly papers in the

state, and a monthly summary listing arrests for conservation law violations. This summary goes to all newspapers, daily and weekly, to judges, district attorneys, secretaries of sportsmen's organizations, and a large number of individuals. The newspapers of the state have co-operated excellently in the use of the material prepared by the division. The department has also prepared special news stories and articles for newspapers and magazines, both within and without the state. These are prepared upon request. Several magazines of national circulation have carried articles and pictures prepared by the division.

Public addresses and illustrated lectures

Public addresses of several types have been one of the principal duties of the division. These embrace the regular lectures to interested groups, radio talks, and co-operative meetings in schools and with teaching staffs.

The radio program of the department has proven a specially fertile field, and through the biennium a great number of radio talks have been prepared and delivered by the division. These average almost one a week, and all the various phases of conservation were discussed. These might be divided into three classes, the regular weekly series programs with a definite continuity, principally over the two state stations, WHA and WLBL being the first of these classifications. In addition have been the radio talks on special occasions and programs; and the short, terse appeals to the public at times of extreme fire hazard. These were prepared by the division and furnished to all radio stations in the state. These stations all cooperated splendidly in interspersing them throughout regular programs when asked to do so, and to this work must be credited much of the increased public co-operation in fire prevention.

A vast number of requests for speakers comes to the division from interested groups, sportsmen's leagues, luncheon clubs, and similar gatherings. As many of these requests have been filled as possible as this is one of the most important phases of the public relation division's work. Many of these lectures and talks were illustrated with the conservation department's quantity of motion pictures and lantern slides.

Motion pictures and lantern slides

The pictorial resources have been greatly augmented the last two years, and as the greater portion of this material retains its value and appeal for years, this section is becoming of greater and greater value. The division now has 29 reels of motion pictures available including the seven new reels which were produced during the biennium. Six more are now in process of completion.

The new reels are: Sweet'nin'; Wild Geese; Wisconsin Muskie; Trout Propagation; Co-operative Trout Rearing and Stream Improvement; Pike Propagation; and Coon Hound Trials.

The reel "Sweet'nin'" was taken in the spring of 1934 in the southern Wisconsin river valley. It tells the story of the making of maple syrup and its ultimate use on pancakes.

"Wild Geese" is one of the finest nature pictures ever produced in Wisconsin. It shows many of the thousands of these largest waterfowl game birds that stop off in Wisconsin in spring and fall. It was made on Lake Geneva and the Big Foot prairie, and Lake Koshkonong and the Rock prairie. There are some remarkable shots in it including one showing geese tumbling to lose altitude; and another showing geese in their typical V-formation, changing leaders.

The trout reel shows how a hatchery works from the time of taking spawn until the fingerling trout are shipped out for stocking. Its sequel, "Co-operative Rearing" shows how sportsmen's organizations operate rearing ponds and subsequently stock the fish in local streams. Half of this second reel is devoted to trout stream improvement work.

The pike propagation reel was made in northern Wisconsin early in the spring of 1934, and tells the story of how the state produces and plants more than 400,000,000 wall-eyed pike each year.

"Wisconsin Muskie" is a fishing picture. It has taken several years to compile the footage on different Wisconsin lakes and rivers. For this remarkable picture of fishing for the tigers of northern waters, several scenic shots add to the beauty of the reel.

The coon hound trial reel gives a graphic idea of an event which is fast becoming one of the most popular outdoor sports. Hundreds of dogs are shown running in the competitive heats, and the picture shows the trials from beginning to end.

These reels are all available to schools and other organizations including civic clubs and sportsmen's organizations, merely upon payment of transportation costs. These new reels are all in the 16 millimeter size. The 22 reels the department had produced prior to these are available principally in the 35 millimeter size, except for four reels—Amik, the Beaver, one reel; Out-of-Doors in Wisconsin, one reel; and New Forests on Idle Acres, two reels—which are available in both 35 and 16 millimeter size. Several of these reels were produced co-operatively with the Milwaukee Public Museum.

Additional sets of lantern slides have been added to the present files including a group of new slides on Wisconsin wild flowers. These include four sets, one on spring flowers, one on early summer flowers, one on midsummer flowers, and one on autumn flowers. A typewritten lecture accompanies each set of slides.

Photography

The general photographic files of the department have been greatly augmented. Approximately 1,000 new pictures were added so that now more than 6,000 pictures are on file and available not only for use in any state publication, but in any publication within or outside the state, providing a credit line is given to the Wisconsin Conservation Department.

The scope of the photographic work is unlimited, and the results furnish a perpetual file which may be referred to in years to come, and which will make available much valuable pictorial information both present and future.

Study courses

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There is an ever increasing demand for courses of study for interested organizations, and for supplementary outlines and source material for use in schools. Some of this material has been developed and made available, but much more is needed.

Fairs and exhibits

Preparation of conservation exhibits for use at fairs, conventions, and outdoor shows continued to be an important part of the work of this division. Along this line, several sets of display material were kept available for use in schools, in civic club meetings, Boy Scout meetings, and similar groups.

The conservation department prepared and maintained exhibits at the Green Bay Tercentennary Exposition in 1934, at the Madison Outdoor Exposition in the summer of 1934, at the conventions of the State Federation of Women's Clubs during both years of the biennium, and at the state fair each year. In both the summers of 1933 and 1934, the division prepared an extensive conservation exhibit for the outdoor show held at Minocqua, where it was generally considered the feature of the show.

The displays expressed true conservation which means proper use of the out-of-doors rather than mere saving. Birds, animals, and fish were shown as the products of a wise conservation program which must be based on forestry and forest protection.

Century of Progress exhibit

The legislature provided for Wisconsin's participation in the Century of Progress when a legislative committee was appointed and \$2,500 set aside in 1931 for the purposes of the exhibit, and again early in 1933 when an additional appropriation of \$35,000 was made to it for the construction and maintenance of the Wisconsin exhibit. These appropriations were in addition to the \$9,000 granted to the committee in 1932 to be used as down payment for the purchase of space.

At various times between 1931 and 1933, the conservation department was asked for proposals and plans for the Wisconsin exhibit, and in April of 1933, a definite plan was submitted to the committee and approved. This plan called for a principally recreational exhibit, and the task of preparation and maintenance of the exhibit was delegated to the conservation department. Several Wisconsin state agencies, communities, and companies co-operated in furnishing exhibit materials, equipment, and transportation.



Entrance to the Wisconsin exhibit at the Century of Progress Exposition 1933.

The superintendent of public relations was director of the exhibit, and the assistant director was a man of many years of experience with the conservation department. In addition, there were two field employes from the department in constant attendance. These men served two weeks each in alternate periods. In all, there were 28 conservation department employes loaned to the Wisconsin Century of Progress committee for work at the display. Every two weeks during the exhibit all the trees and boughs were changed. This necessitated the trip of a large conservation department truck from one of the northern forestry districts to Chicago with a load of fresh green stuff.

Accomplishments of the exhibit

The Wisconsin exhibit cost the state less than any other state exhibit, yet in all popularity contests the Wisconsin exhibit ranked among the first four. It was impossible to keep a complete record of all the persons who entered the exhibit, but a conservative estimate places the total attendance at 6,500,000.

The general consensus of opinion was that the Wisconsin exhibit secured more benefit to the state in proportion to the amount of money spent than did any other state exhibit. Thousands of parties of tourists were routed through the state. The greatest value of the exhibit was probably in the good will it created for future business rather than in any direct business resulting from the one year's participation.

State Geographic Board

By statute the administration of the functions of the State Geographic Board is assigned to the conservation department. The purpose of the geographic board is to remove duplication of names of lakes, streams, and other geographic features in the state. All duplication of names was cleared up in Sawyer county, and work has progressed on several other counties. There has been a great deal of investigation of maps and research in finding appropriate names for geographic features.

Publications

A number of pamphlets and bulletins were prepared and published by the division in co-operation with other divisions of the department. The "Laws Relating to Conservation;" reprints of the forest crop law pamphlet; the Northern State Forest pamphlet; the hunting, fishing, and trapping season sheets; state park bulletin; and the Cushing Memorial State Park pamphlet were those published.

With the change in the method of establishing seasons and bag limits, the old type game law pamphlet had to be discontinued. The conservation department now issues new sheets on fishing, hunting, and trapping which carry much more information on each specific season and its regulations than did the old pamphlet.

Expansion of activities

In addition to the routine news and propaganda releases by the division, there are two additional services which would be of great value. The first of these is an illustrated feature service to be furnished free of charge to the daily and weekly newspapers of Wisconsin. This would require a graphic artist whose services are also needed for several other purposes as well. The other is a short feature service in mimeograph form to be supplied regularly to newspapers, portraying human interest features of birds, animals, fish, trees, and other subjects with which the conservation program is concerned.

There is a great need for basic educational text material for use in Wisconsin public schools; the person or persons preparing this material could carry on lecture work in the schools of the state while preparing the texts. The division gets hundreds of requests each year from teachers who are anxious to correlate the teaching of conservation with the existing courses of study.

With the increased use of motion picture reels and lantern slides, many more of these are needed, particularly on forestry, fisheries, and game subjects.

Among the bulletins and pamphlets which should be published are identification books of fish, birds, animals, and flowers; also pamphlets of the individual state parks of Wisconsin; fish and duck foods; an advertising booklet on the state; methods of fish and bird stock-

ing and rearing; and a catalog of publications and motion pictures available. A great need has also been felt for a regular monthly conservation department publication, a combination conservation educational and promotional magazine. Such a publication could shortly be made partially self-supporting through revenue derived from subscriptions as scores of people inquire for and emphasize their willingness to subscribe and pay for such a magazine.

An extremely receptive field for the dissemination of conservation knowledge and education is that of county and district fairs, the state fair, outdoor shows, and advertising and good will tours. Lack of funds has prevented the division from making use of this field to any great extent in the past.

Part II—Section 1

ADMINISTRATION

FINANCIAL STATEMENT

of the

WISCONSIN CONSERVATION DEPARTMENT

Fiscal Years of
July 1, 1932 to June 30, 1933
and
July 1, 1933 to June 30, 1934

Disbursements

1982-1988

	1982-1988	1983-1984
General Administration	38,844.90	85,775.09
Parks Division		
Administration	2.015.68	1.667.99
Compensation awards	-,	14.00
Copper Falls	424.84	853.62
Cushing Memorial	492.59	404.60
Devils Lake	7.808.06	6.528.79
First Capitol	81.92	
Merrick	984.71	. 85.00 707.78
Interstate	2.576.78	2.411.12
Nelson Dewey	1.148.35	1.098.94
Pattison	872.39	807.64
Peninsula	6.589.67	7.129.65
Perrot	210.80	215.80
Potawatomi	977.17	613.83
Rib Mountain.	707.60	689.48
Terry Andrae	2.573.08	2.492.87
Tower Hill	658.81	636.08
Tower rim	000.01	030.08
	27,567.35	25,752.09
Law Enforcement Division	160,778.48	184,071.98
Figheries Division		
Administration	10.704.17	9.861.87
Compensation awards	20,102.21	27.00
Antigo	185.86	295.55
Bayfield	12.264.85	12,108.00
Birchwood	89.12	11.16
Brule	284.87	582.76
Burlington	8.789.88	3.568.18
Delafield	4.987.01	4.891.59
	7.09	6.11
Eagle River	2.684.08	2,029.97
Eau Claire	1.879.86	
Hayward	1,019.80	2,840.72
Haugen		
	00 54	18.17
Hebron	28.54	29.61
HebronLakewood	15.81	29.61 18.52
Hebron		29.61

	1982-1988	1988-1984
Oncords		
Osceola Sheboygan	17,806.66	19,121.00 2,926.10
Sparta	8,482.12 619.51	2,320.10
Spaner	14 49	9.92
Spooner St. Croix Falls	11,488.90 4,758.58	11.067.54
Sturgeon Bay	4.758.58	11,067.54 2,706.17
Transportation	18,659.82	13.811.75
Westfield	6.376.10	5,598.82
Wild Rose	11,488.82	11,174.47
Mississippi River Rescue		11,174.47 6,229.84
Lole Michigan accord	7,699.24 448.39	7,418.62
Lake Michigan research Research—Trout Lake	140.07	2,803.50
Fire loss—fish car. Fire loss—Minocqua Fire loss—Osceola. Supervising warden—rough fish. Miscellaneous.	50.00	2,000.00
Fire loss—Minocqua	50.00	
Fire loss—Osceols	191.91	
Supervising warden—rough fish	1,289.92	6,811.05
Miscellaneous.		1,848.65
-	127,885.08	140,264.60
	127,885.08	140,204.00
Game Division		
Administration	7,007.60	7,199.56 207.00
Compensation awards		207.00
Fish Creek Game Farm Moon Lake Game Farm	28,538.58	24,820.84
Povnotto Cama Farm	10,726.64	9,048.98 8,736.84
Winter feeding	1,874.90	1,626.66
Refuges	2.891.57	3,018.49
Game Census	2,891.57 1,809.00	1,062.15
Poynette Game Farm Winter feeding Refuges Game Census Fur Bureau	5,400.57	6,024.15
-	57,248.86	61,784.17
Public Relations	3,983.95	1,719.22
Research Bureau Deer damage	2,425.90 8,769.87	2.084.78
Field Investigator	27.15	2,004.10
Field Investigator Park Recreation	4.762.87	6,624.03
Forestry Division		
Administration	14,840.44 806,929.08	11,887.80
Administration Forestry and fire protection Fire suppression	806,929.08	284,547.55 875,078.72
Fire suppression	102,885.81	375,078.72
Nursery State forests	75,745.55 20,919.88	23,358.34
County forests	27 208 52	5 930 66
Public Relations	27,208.52 12,985.49	10,210.57 5,930.66 9,282.76
Land Exchange. Wardens—forestry Blister Rust Control Land Inventory	5,651.44	494.25
Wardens—forestry	32,951.24	2,746.89
Blister Rust Control	2,554.01	
Land Inventory	4,038.22	
Miscellaneous.	2,363.46	1,141.68
	608,968.14	674,124.22
Bounties	26,150.00	35,210.00
Receipts		
Non-resident licenses		
Non-resident fishing licenses	117,845.80	106,802.28
Non-resident fishing coupons. Non-resident hunting licenses.	8,849.40 6,750.00	2.964.00
Non-resident nunting licenses	6,750.00	4,575.00
-	128,445.20	113,841.28
Dathan was War	180, TTO . 80	110,011.20
Resident game licenses	105 100 50	484 040 45
Resident hunting licenses. Settlers hunting licenses.	185,466.55 487.00	174,848.18
Dunlicate licenses	487.00 248.00	184.00 840.70
Duplicate licenses Deer tags	87 149 KM	1,088.82
Tranning licenses	9,588.50 7,257.90	13.543.86
Trap tags.	7,257.90	15.208.18
Resident rod & reel fishing licenses	887.00	101.565.40
Trap tags. Resident rod & reel fishing licenses. Decoy bands.	1,868.79	1,695.50
-	271,888.24	308,424.64
		~~~,

	1982-1988	1988-1984
Resident fish licenses (commercial) Clamming licenses. Set line licenses. Guide licenses. Sturgeon tags. Fish dealer licenses. Great Lakes fishing licenses. Mississippi River fishing licenses.	335.00 1,426.35 363.00 215.85 1,550.00 7,049.50 1,134.00 5,010.00	6,225.00 1,714.60 393.00 226.20 1,625.00 7,346.50 909.00
Rough fish	5,010.00	10,010.97
Interest		5,094.60
-	17,082.70	34,048.97
General Confiscations. Warden fees Game, fur and deer farms Taxidermist licenses. Fur dealer licenses. Xmas tree dealer licenses Interest. Miscellaneous. Park rentals. Golf receipts.	18,421.80 2,381.40 6,785.46 675.00 2,996.50 2,802.77 4,584.70 4,067.50 4,100.84	9,708.55 2,880.68 4,918.73 420.00 5,928.00 8,158.52 2,729.23 8,173.83 5,149.59 8,703.96
Forestry Clarke-McNary receipts 50-50 returns from counties Nursery Forestry mill tax General forestry appropriation	35,907.89 902.90	88,144.86 47,485.05 1,506.91 426,270.42
Grand Total	,	1,065,935.67

### BOUNTIES PAID ON WILD ANIMALS*

### From July 1, 1932 to June 30, 1933

County		Wolves byotes		Wolves byotes	Wild or L		Total
Adams	1	\$ 20					\$ 20
Ashland	126	2,520	39	\$ 390	19	\$ 95	3,005
Barron	5	100			1	. 5	105
Bayfield	116	2,320	56	560	6	30	2,910
Buffalo	. 1	20	4	10			60
Burnett	18	360	7	70	1	5	435
Chippewa	2	40					40
Clark	2	40		<del>.</del>   -			40
Crawford	1	20					20
Dane	1	20	4	40			60
Douglas	80	1.600	. 8	80	4	20	1,700
Clorence	48	960	17	170	17	85	1.215
Forest	55	1,100	15	150	26	180	1,380
Grant	4	80					80
ron	97	1,940	8	30	12	60	2.030
ackson	9	180	16	160			840
uneau	6	120					120
a Crosse	2	40					40
afayette	1	20					20
anglade	29	580	9	90	1	5	675
incoln	18	360			9	15	405
Marathon	5	100					100
Marinette	95	1.900	6	60 l	10	50	2.010
Monroe	1	20					20
Oconto	15	800	1	10	5	25	335
Oneida	49	980	3	30	8	40	1.050
olk			6	60			60
ortage	2	40			1	5	45
Price	28	560	1	10	20	100	670
Richland	ī	20	-				20
Rusk	24	480	25	250	1	5	735
t. Croix	-i	20			•	٠,١	20
auk	ī	20	· • · · •				20
awyer	60	1.200	25	250	23	115	1.565
hawano	21	420	29	90	2	10	520
aylor	19	380			ĕ	30	410
ernon	2	40	· · · · · ·		ĭ	5	45
ilas	97	1.940	27	270	19	95	2.305
Washburn	26	520	25	250	3	15	785
Wood	12	240	20	-00	Ū		240
Total	1.081	\$21,620	306	\$3,060	195	\$975	\$25.655

### **BOUNTIES PAID ON WILD ANIMALS***

### From July 1, 1933 to June 30, 1934

County	Mature Wolves or Coyotes			Volves yotes		Cats ynx	Total	
Adams	1	\$ 20	<b></b>	<b>-</b>	. <b>.</b>	<b></b>	\$ 20	
ashland	171	8,420	88	\$ 880	82	\$ 160	4,460	
Barron	4	80	10	100	2	10	190	
Bayfield	100	2,000	49	490	9	45	2,535	
Buffalo			4	40			40	
Burnett	18	260	17	170			480	
Chippewa	. 8	60			4	20	80	
Douglas	68	1,360	40	400	11	<b>5</b> 5	1,815	
Florence	91	1,820	2	20	12	60	1,900	
Forest	61	1.220	10	100	21	105	1,425	
Grant	1	20					20	
Iowa	. 1	20					20	
Iron	172	8,440	24	240	29	145	3,825	
Jackson	8	60	9	90			150	
Kenosha	. 1	20	- <b>-</b>	<del></del>			20	
La Crosse	1	20	<u>-</u> -				_20	
Langlade	21	420	6	60	9	45	525	
Lincoln	27	540	6	60	8	40	640	
Marathon	1 90	20					20	
Marinette		1,800	45	450	48	215	2,465	
Oconto	24	480	14	140	10	50	670	
Oneida	26	520	26	260	16	80	860	
Polk	2	40 20	2	20			60	
Portage				10	1		35	
Price	55 14	1,100 280	21 16	210 160	81 8	155	1,465	
Rusk	14	280	10	100	3	15	455	
Sauk						. 6	5	
Sawyer	60 26	1,200 520	40	400	14	70	1,670	
Shawano	26 18	260	2 5	20 50	6	80 20	570 880	
Taylor		200 20	111		4	20		
Vernon	98			110	<del>-</del>		180	
Vilas		1,960	126	1,260	24	120	3,840	
Walworth Washburn	1 21	20 420	22		<u>-</u>		20	
			22	220	9	45	685	
Waupaca Wood	7	140 80	6	60	2	10	150	
W 000	4	80	1 6	90	1	5	145	
Total	1,183	\$23,660	602	\$6,020	302	\$1,510	\$81,190	

SALE OF RESIDENT HUNTING AND TRAPPING LCENSES

1938	Trapping Licenses	201 201 201 201 201 201 201 201 201 201
19	Hunting Licenses	2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000
	Trapping Licenses	83 112 123 123 123 123 123 123 123 123 12
1932	Deer Tags	2 486 2 100 2 192 1 1636 1 1636 1 1636 1 1636 1 160 1
	Hunting Licenses	0.000000000000000000000000000000000000
1881	Trapping Licenses	8888 8888 8888 8886 8886 8886 8886 888
19	Hunting Licenses	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
	Trapping Licenses	2011 2011 2011 2011 2011 2011 2011 2011
1980	Deer tags	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	Hunting Licenses	200 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
929	Trapping Licenses	250 250 250 250 250 250 250 250 250 250
19.	Hunting Licenses	8488 11.1488 11.1488 11.1488 11.1488 11.1488 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 11.1873 1
County	famoo	Adams Ashland Barron Barron Barron Bayfield Brown Buffalo Burnett Calumet Calumet Calumet Columbia Columbia Columbia Crawford Done Columbia Crawford Done Crawford Done Crawford Done Crawford Done Crawford Done Crawford Done Done Done Done Done Done Done Crawford Done Done Done Done Done Done Done Done

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### BIENNIAL REPORT

SALE OF RESIDENT HUNTING AND TRAPPING LICENSES—Continued

	13	6261		1930		18	1881		1982		7	8861
County	Hunting Licenses	Trapping Licenses	Hunting Licenses	Deer	Trapping Licenses	Hunting Licenses	Trapping Licenses	Hunting Licenses	Deer	Trapping Licenses	Hunting Licenses	Trapping Licenses
ermotte	686	289	1 094		108	806	266	885	147	92	877	244
Milwaukee	22,487	100	24,875	3,882	8	20,102	3	21,429	888	7	19,724	29
Monroe	1,820	282	2,166	200	208	2,187	199	2,446	191	2.0	2,231	<u> </u>
Dreida	1.680	<b>4</b> 20	8,095	2,848	25	2,068	880	8,868	2,601	168	2,492	378
Outagamie	3,601	616	4,287	1,182	876	8,887	182	4,009	1,258	104	4,006	5
zaukee	1,016	148	1.217	174	119	1,147	200	1,207	168	2 8	1,207	
Pieres	1 241	202	1,505	407	286	308	282	1.811	417	186	1.883	158
olk	1,880	708	2,195	1,649	872	1,863	668	1,966	1,297	180	1.596	648
ortage	2,821	363	8,466	1,074	258	3,318	251	8,499	1,047	149	8,108	36
rice	941	188	27.046	188.2	871	1,114	988	7 989	2,891	138	929	35
Richland	1.094	828	1.480	300	210	1.141	8	1.258	323	245	1.096	186
Rock	4,981	841	5,898	203	268	4,265	268	4,241	206	96	4,457	17
Rusk	1,175	689	2,750	2,476	862	1,665	874	2,697	1,840	152	1,624	365
St. Croix	1,146	4.00	1.409	090	797	1,040	250	1,888	910	110	1,000	101
Sauk	200,4	770	96.	769	176	7,01	500	200	1 494	156	200.1	200
Shawano	1.689	310	2.368	888	241	1.988	198	2,536	066	86	2,180	187
Sheboygan	8,619	369	4,114	263	297	3,757	260	8,783	688	138	4.173	22
aylor	1,193	491	1,917	1,881	281	1,560	235	2,239	1.417	139	1,808	168
rempealeau	1,812	545	896	8	83	1,367	898	1,524	292	178	1,587	408
ernon	1.304	288	1.540	325	928	83.	278	1,162	900	800	981	506 1 v I
V 1188	940	010	1,930	070.1	262	1,008	200	0.130	1.710	120	2 987	300
Walworth	865	498	968	1.598	177	100	35.5	794	1.040	186	1.191	261
Washington	2.144	280	2.418	230	193	2.204	195	2.411	298	8	2,554	791
Waukesha	8,572	427	8,966	462	214	8.420	358	4,041	585	68	4,012	348
Waupaca	3,656	88	4,209	1,093	884	3,381	654	3,071	1,272	421	2,990	398
Waushara	1,487	393	1,706	000	387	1,605	231	1.624	000	194	1,556	166
Winnebago	8,215	869	8,907	1.300	252	4,187	88	4,716	1,252	<u> </u>	4,706	160
Total	168 467	28 912	919 748	77 984	18 940	175 994	10 899	204 670	70.245	9.658	186.095	15.556
Loran	100,001	\$1 A 1 C	2001,012	3	76.01	110,631	770.61	:10'102	2.0	1,5	2221201	

Note: Deer tag sale only in years in which there is a deer season.

### WISCONSIN CONSERVATION DATES

	Chapter	Year
Fish Inspector	77	1866
Commission to Investigate Forestry Conditions	36	1867
	46	1869
Commissioner to Receive Spawn	258	1874
Neh Commissioners	299	1878
Fish Commissioners	824	1878
Fame Wardens	456	1887
Tish Wardens	455	1887
state Fish and Game Warden	436	1891
Commissioners of Fish and Fisheries	221	1895
Chief clerk of land commission made State Forest Warden	266	1895
Commissioners to Plan for Forestry Department.	229	1897
sale of first State Park lands	867	1897
nterstate Park Commission	102	1899
nterstate Park Commission	805	1901
tate Department of Forestry	450	1903
Provision for purchasing state forest reserve	450	1903
Commissioners of Interstate Park of the Dalles of the St. Croix	895	1905
State Board of Forestry	264	1905
	264	1906
	495	1907
State Park Board	548	1907
Superintendent of Fisheries  First Conservation Commission	644	1911
	099	1915
Adverse Supreme Court forestry decision	406	1915
Second Conservation Commission	118	1928
Fourth Conservation Commission—Conservation Commissioner	426	1927

### Part II—Section 2

### FOREST PROTECTION

### SUMMARY OF FOREST AND MARSH FIRES FOR 1933 AS REPORTED BY DISTRICT FOREST RANGERS

District	No. of Fires	Acres Burned	Acreage Burned per Fire	Reported Damage	Under ¼ Acre	14 to 10 Acres	10 Acres and Over
1	298	8,298		\$ 6,698	48	168	82
2	360	16,724	46	12,905	74	152	134
3	229	21,740	95	17,577	77	105	47
4	308	10,722	34	12,908	36	224	48
5	265	7,609	28	5,884	80	163	72
6	581	16,658	31	28,787	118	308	110
7	567	58,484	103	65,827	15	300	252
8	200	97,918	489	168,545	10	105	85
9	262	5,466	21	4,889	49	166	47
10	348	5,450	16	1,487	28	252	73
11	291	10,022	84	2,298	46	168	77
Total or							
a verage	3,659	259,041	71	\$826,748	521	2,111	1,027

### FOREST AND MARSH FIRES 1933 Number, Area, and Damage by Causes

Cause	Light- ning	R. R.	Log- ging	Clear- ing	Camp Fires	Smokers	Incen- diary	Misc.	Total
Number	75	168	54	949	274	1,879	555	205	8,659
Acres burned	450	9,285	9,643	28,971	24,774	124,926	48,561	17,481	259,041
Dollars dam- age	\$527	\$9,903	\$9,227	<b>\$2</b> 3,119	\$18,741	\$178,178	<b>\$49</b> , <b>2</b> 75	<b>\$</b> 87,773	\$826,748

### FOREST AND MARSH FIRES 1933 Acres Burned by Land Classes

Dis- trict	Merchantable Timber	Young Growth	No Forest Growth	Total Forest Land	Non- forest	Total Acres Burned
1	286	4,698	826	5,805	2.998	8.298
2	88	10,188	2,310	12,538	4,188	16.724
3	1,329	19,100	291	20,720	1.020	21,740
4	12	6,717	1,176	7,905	2.817	10,72
5		4,801	1,836	6,687	972	7,609
6	64	6,815	1,371	8,250	8,408	16.65
7	86	27,897	5,118	33,096	25,338	58,48
8	17,275	67,647	8,463	88,885	9,583	97,91
9	8	4,096	886	4,985	481	5,46
10		2,780	347	8,127	2,823	5,45
11	568	2,624	146	3,838	6,684	10,02
Total	19,661	157,358	17,285	194,284	64.757	259.04

### FOREST AND MARSH FIRES 1983 Damage by Class of Damage

Tir	nber	December 1	Other	Total
M. B. F.	Value	Reproduction Value	Damage	
1,459	\$ 18,214	\$278,024	\$ 80,505	\$326,743

### SUMMARY OF FOREST AND MARSH FIRES FOR 1934 AS REPORTED BY DISTRICT FOREST RANGERS

District	No. of Fires	Acres Burned	Acreage Burned per Fire	Reported Damage	Under ¼ Acre	½ to 10 Acres	10 Acres and Over
1 2	819 242	6,984 6,648	22 27	\$ 5,189 971	104 61	155 181	60 50
8	217 212	3,582 2,378	16 11	338 7,564	181	77 122	9
5 6	156 810	11,778 5,662	75 18	6,888 5,764	68 82 187	87 104	37 19
7 8 9	389 189	5,827 3,180	15 23	2,197 989	121 39	188 75	22 37 19 80 25
10 11	154 864 871	7,576 37,955 36,323	49 104 98	6,191 60,600 18,788	45 36 94	72 211 178	117 99
Total or average	2,878	127,798	44	\$115,419	918	1.400	555

### FOREST AND MARSH FIRES 1934 Number, Area, and Damage by Causes

Cause	Light- ning	R. R.	Log- ging	Clear- ing	Camp fires	Smokers	Incen-	Misc.	Total
Number	86	182	10	901	182	902	387	223	2,873
Acres burned	264	16,214	105	21,126	9,196	19,670	55,643	5,575	127,793
Dollars dam- age	\$178	\$5,091	\$4,088	\$6,037	\$5,880	\$17,897	\$72,2 <del>8</del> 2	\$4,616	\$115,419

### FOREST AND MARSH FIRES 1934 Acres Burned by Land Classes

Dis- trict	Merchantable Timber	Young Growth	No Forest Growth	Total Forest Land	Non- forest	Total Acres Burned
1 2 3 4 5 6 7 8 9 10	28 10 2 2 2 50 3 170 24 827	8,969 1,769 527 1,599 4,548 2,929 3,019 840 4,310 26,461 18,080	1,014 1,014 30 137 8,670 1,388 1,006 165 2,398 8,025	4,541 2,793 559 1,788 8,218 4,362 4,025 1,008 6,878 29,510 14,776	2,448 3,855 2,973 640 8,560 1,300 1,802 2,122 698 8,445 21,547	6,964 6,648 3,532 2,378 11,778 5,662 5,837 3,130 7,576 37,955 36,323
Total	1,116	68,001	14,291	78,408	49,885	127,793

### FOREST AND MARSH FIRES 1934

### Damage by Class of Damage

т	imber					Other	Total
M. B. F.		Value	R	Reproduction Value		Values	 Damage
664	\$	1,628	\$	46,286	\$	67,505	\$ 115,419

### FOREST AND MARSH FIRES

### Record by Years

Year	Total Cost of Protection	Area Under Protection in Million Acres	Cost per Acre in Cents	No. of Fires	Percent of Fires 10 Acres or Less	Area Burned Over	Acre- age per Fire	Dam- age
1929	\$164,660.28 \$12,855.22 \$84,260.44 483,612.14 523,491.59 \$96,894.84	18.5 13.6 13.1 13.1 12.7 12.7	1.2 2.3 2.9 3.8 4.1 3.1	960 2,800 2,840 3,168 3,659 2,873	88.4 33.2 32.5 66.7 72.0 81.0	108,888 518,856 840,979 119,458 259,041 127,798	109 228 274 88 71	\$72,770 460,627 421,501 69,820 826,784* 115,419

^{*} Revised damage schedule adopted.

### FOREST AND MARSH FIRES

### Expenditures

Year	Contributed by State	Contributed by Federal Government	Contributed by Counties	Total Cost of Protection
1929	\$ 110,989.71	\$ 38,187.40	\$ 15,583.17	\$ 164.660.28
1930	183,181.85	43,788.43	85,940.44	\$12,855.22
1931	268,622.80	51,819.05	63,818.59	\$84,260.44
1932	314,301.49	67,015.00	52,295.65	433,612.14
1933	359,082.79	51,789.00	164,408.80	523,491.59
1934	242,744.85	109,200.00	44,949.99	\$96,894.84

### FOREST AND MARSH FIRES

### Allotment of Expenditures

Year	Administrative Expense	Field Personnel	Equipment and Improvements	Fire Fighting	Total Cost
1929	\$ 8,000.00	\$ 77,645.51	\$ 52,848.40	\$ 81,168.37	\$164,660.28
	6,857.82	103,112.49	81,084.52	171,880.89	312,855.22
	17,848.18	156,131.28	82,643.80	127,637.18	384,260.44
	89,616.95	198,876.85	90,527.08	104,591.31	433,612.14
	27,598.71	169,962.11	48,902.17	328,817.60	523,491.59
	48,881.51	146,631.63	116,481.72	89,899.98	396,894.84

### Part II—Section 3

### FORESTRY—STATE FORESTS AND REFORESTATION

### CLASSIFICATION OF STATE OWNED LANDS WITHIN WISCONSIN STATE FORESTS

Name of Forest	Location (county)	Forest Land* Acres	Trust Fund Lands** Acres	Total
Brule River Northern State American Legion Flambeau River	DouglasVilasOneidaSawyer	3,711 102,140 17,456 833	280 1,782 320 2,128	3,991 103,922 17,776 2,961
Total		124,140	4,510	128.650

^{*}Under jurisdiction of conservation commission.
**Under jurisdiction of commissioners of public lands.

### ANNUAL OUTPUT OF STATE FOREST NURSERIES

Year	For County Planting	For State Highway Planting	For Private Planting	For State Planting	Total Output
1911				192.800*	
1912				18.000**	
1918				68,500	68,500
1914			20,200	458,480	478.630
1915			77,400	1	77.400
1916			110,200	216,650	326,850
1917			272,105	382,525	604,630
918			246.278	262,485	508.76
919			200.151	809.900	510.05
920			206,682	118.875	320,55
			199,601	255.925	455.526
922			39.482	88.710	128.191
928			177,260	176.800	354.060
			247,000	163.300	410.800
925			350.588	160.700	511.23
926					1.172.697
927			748,497	424,200	
			1.088,249	579,000	1.617,249
928			1,101,464	637,200	1,788,664
929			1,398,267	1,022,750	2,416,017
980			1,185,075	981,500	2,166,575
981			1,304,250	2,050,850	8,854,600
982	<u></u>	[ <u></u>	880,315	5,701,500	6,581,815
988	2,954,800	90,500	822,950	1,278,550	5,141,800
984	8,617,845	27,000	1,486,725	6,564,940	16,696,510
Total	11,572,645	117,500	12,107,689	22,048,090	45,635,624

^{*} Stock secured from Michigan State College. ** Stock purchased.

# OUTPUT OF STATE FOREST NURSERIES

			1988	_			-	1984		
Species	For Private Plantings	For State Plantings	For County Lands	For State Highways	Total	For Private Plantings	For State Plantings	For County Lands	For State Highways	Total
Trout Lake Nursery Jack pine Norway pine. Sockh pine. White pine.	1,000 258,176 87,675 236,076 134,776	112,300 2,420,586 28,340 6,200 6,200 8,400	1,115,200 1,276,275 60,500 20,000	9,500	1,228,500 4,003,035 176,515 270,775 192,890 161,725	32,100 232,075 83,500 303,500 608,550	2,471,500 2,874,015 82,925 708,080 312,286 166,185	2,289,486 2,617,266 37,000 1,201,480 640,936 290,180	11,500 5,000	4,798,086 5,784,855 168,425 2,218,710 1,561,770 698,865
Total		2,627,940	2,482,050	90,500	6,023,440	1,486,725	6,564,940	7,076,845	27,000	15,155,010
Wisconsin Rapids Nursery Jack pine Norway pine								1,216,500		1,216,500 825,000
Total						1		1,541,500		1,541,500
Grand total	822,950	2,627,940	2,482,050	90,500	6,028,440	1,486,725	6,564,940	8,617,845	27,000	16,696,510
Grand total for biennium. 22,719,960	biennium							1		22,719,950

### DISTRIBUTION OF FOREST PLANTING STOCK TROUT LAKE NURSERY—1933

County	State Forest Planting	County Forest Planting	Extension Planting	General Distribu- tion	County Highways	Total
dams	- <b>-</b>		11,500			11,50
shland	- <b>-</b>		9,675			9,61
				1,000		1,00
			4,900	18,000		22.90
			9,275 10,000	8,000		12,21
uffalo			10,000	1,000		11.00
		465,000	4,000			469,00
			800	2,000		
hippewal			2,875 21,000	2,000		4,87 21.00
olumbia			21,000	500		5.0
rawford				1,000		1,00
ane	18,000		750	3,000		16.76
odge			8,500	0,000		8,50
oor			9.250	1,000		10,25
Ouglas	487,100		9,250 10,025	9,000		50K 19
hinn			6.300	<b>.</b>		6,30
au Claire		800,000	9,600 3,000	5,500		6,30 315,10 3,00
au Claire lorence ond du Lac			3,000	l		8,00
ond du Lac			l	1,625	<u>-</u>	1.62
orest		- <b>-</b>	11,000	500	5,000	16,50
			9,025	1,700		10,7
reen			1,000			1,00
reen Lake			6,000 10,000	1,000		7,00
0 <b>wa</b>			10,000	1,000	:	11,00
ron	500,090	883,650	500	5,500	47,000	558,09
ackson		383,660	1,000	1,000 8,000		885,65
efferson unesu		508,050	3,000 2,000	3,000		6,00 505,05
uneau		303,030	2,000	8,000		8,00
Cemaunee			5,000	3,000		5,00
a Crosse			11,775	5,000		16,77
alayette			6,000	1 5,000		6.00
anglade					2.500	14 50
. 7.	l .		10.925	3,500		14.42
Marathon Marinette	<b></b> . <b>.</b>	l	12,775	1,000 2,000 2,000		14,42 18,77 827,80
Marinette		780,200	45,100	2,000		827,80
viarquette	<b> </b>		19,800	2,000		21,30
Milwaukee	- <b>.</b>		10,575	6,025		16,60
Monroe			12,000 10,925 12,775 45,100 19,800 10,575 11,000		<b></b>	11,00
Deonto Dneida				4.500	8,000	4,50
)Deiga		] <b></b>	11,950	22,200	3,000	1,262,15
)utagamie )zaukee			20,000 7,175	8,000	[	20,00 10,17
Pepin			4 600	3,000		4,60
epin			10 925	1.000		11 92
Polk			17 750	1.000	[	18 75
ortage			82.925	4.000		11,92 18,75 36,92
rice			4,600 10,925 17,750 82,925 19,000	1.000	18,000	36.00
Richland			300	l		300
lock			6,050	1,525		7,57
lusk	<b></b>		26,000	l		26,00
t. Croix	<b></b>		16,275	16,000		32.27
auk		<b>:</b> :-:::-	10,800	4,000		14,80
awyer	850	50,150	12,000	2,000		65,00
hawano			6.550	2,400 10,150		2,40 18,20
heboygan	1,500		0,560	1,000	[	1,00
rempealeau			28,900	8,500		27,40
ilas	892,400	<del>-</del>	9,000	7,000	17,000	425,40
Valworth	1,000		3,000	1.000	11,000	2,00
Vashburn	1,000		19,025	1,000		20,02
Washington	6,000	1	11,100			17,100
Vaukesha	1,000		I 9.X75	7,275		18, 150
Vaupaca		l	6.850	l. <b>.</b>	1	6,850
Vaushara		l. <b></b>	38,125	10,000		48, 125
Vinnebago		I	6,850 38,125 8,000		l	8,000
Vood		l	14,450	l	l	14,450

### BIENNIAL REPORT

### DISTRIBUTION OF FOREST PLANTING STOCK TROUT LAKE NURSERY—1934

Chippewa         26,000         800           Clark         17,000	
Bayfield   S,000   S,500   Burnett   S,000   S,500   S   S,500   S   S,500   S   S   S   S   S   S   S   S   S	8,500 47,700 7,000
Bayfield   S,000   S,500   Burnett   S,000   S,500   S   S,500   S   S,500   S   S   S   S   S   S   S   S   S	47,700
Bayfield   S,000   S,500   Buffalo   S,000   S,500   Buffalo   S,000   S,500	7,000
Burnett 1,156,040 500 1, Chippewa 26,000 800 1, Chippewa 17,000 22,000 2,000	8,000
Burnett 1,156,040 500 1, Chippewa 26,000 800 1, Chippewa 17,000 22,000 2,000 Clark 17,000 22,000 2,000 Clark 17,000 22,000 Crawford 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000	5,500
Clark	20,000
Clark	156,540 26,800
Columbia         22,000         2,000           Crawford         1,000           Dane         300         16,600         4,700           Dodge         3,000         1,000         1,000           Door         2,500         5,500         5,500           Douglas         875,240         375,000         9,000         1,100         C-1,000           Dunn         11,000         1,000         1,000         S000	17 000
Crawford         1,000           Dane         300         16,600         4,700           Dodge         3,000         1,000         1,000           Door         2,500         5,500         5,000           Dunn         11,000         1,000         1,000           Dunn         11,000         1,000         1,000           Eau Claire         95,000         20,450         4,000           Florence         3,000         4,000         560           Fornest         1,000         4,000         1,500           Grant         10,000         1,500         1,500           Green         7,000         1,500         1,000           Iron         1,558,125         8,500         1,000           Jackson         400         385,800         23,000         2,150           Jefferson         4,000         230,400         4,000         2,150           La Crosse         21,000         595,000         1,200           La Spetted         1,700         10,000         1,000	17,000 24,000
Dodge	1,000
Door	21,600
Door	4,000
Dunn     11,000     1,000       Eau Claire     95,000     20,450     4,000       Florence     3,000     4,000       Fond du Lac     1,000     4,000       Forest     157,775     10,000     1,500       Grant     10,000     1,500     0       Green     7,000     1,000     1,500       Iowa     2,650     1,000     1,000       Iron     1,558,125     8,500     2,800       Jackson     400     385,800     23,000     2,150       Jefferson     6,500     2,150     1,000       Juneau     4,000     230,400     4,000       Laf Crosse     21,000     595,000     1,700       Lafayette     1,700     1,700     1,200	8,000
Eau Claire 95,000 20,450 4,000 Florence 8,000 1,000 4,000 Forest 157,775 10,000 1,500 Green 7,000 1,500 10,000 1,500 Iron 1,558,125 28,660 1,000 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500	261,840
Florence	12,000
Fond du Lac	119,450 3,000
Forest. 157,775 10,000	5,000
Grant. 10,000 1,500	167,775
Green 7,000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	11,500
Iowa     2,650     1,000       Iron     1,558,125     8,500     1,       Jackson     400     385,800     23,000     2,150       Jefferson     6,500     2,150     2,150       Juneau     4,000     230,400     4,000     23,000     595,000       La Crosse     21,000     595,000     1,700     1,200     1,200       Lafayette     1,700     10,000     1,000     1,000     1,000	7,000
Jackson     400     385,800     23,000       Jefferson     6,500     2,150       Juneau     4,000     230,400     4,000       La Crosse     21,000     595,000       Lafayette     1,700     1,200       Lampete     584,000     10,000	8.650
Jackson     400     385,800     23,000       Jefferson     6,500     2,150       Juneau     4,000     230,400     4,000       La Crosse     21,000     595,000       Lafayette     1,700     1,200       Lampete     584,000     10,000	566,625 859,200
Jefferson	859,200
Juneau	8,600
Lafayette	200,400 212 000
Langiade         584,090         10,000         1,000           Lincoln         448,640         1,000         1,000           Manitowoc         2,000         1,000         2,000           Marathon         1,000         20,600         2,500	8,650 288,400 616,000 2,900 594,090
Lincoln 448,640 1,000 1,000	594.090
Manitowoc 2,000 1,000	445,640
Marathon 1.000 20.600 2.500	8,000
	24.100
Marinette 1,775,450   82,400   2,000	809,850
Marquette 10,500 2,000	12,500
Milwaukee 4,000 7,025	11,025
Monroe	1,000
Oneida 752,200 860,000 18,850 9,000 S- 26,000 1,	666,050
Outagamie 1.250   1.250	137.250
Ozaukee 5.000	5,000
Pepin	15,000
Pierce 18,700 1,200	14,900
Polk 8,000 23,000 Portage 19,200 7,000	81,000
Portage 19,200 7,000 Price 48,000	26,200 48,000
Price 48,000 150 Richland 5,000 150 Rock 8,000 1,000 Rusk 87,800 3,000 Rusk 87,800 8,000  Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 87,800 Rusk 8	5,150
Rock 8,000 1,000	9 000
Rusk 87,800 8,000	40,800 68,250 15,250
Rusk 87,800 8,000 St. Croix 48,000 20,250	68,250
Sauk       8.800   6.450	15,250
St. Croix         48,000         20,250           Sauk         8,800         6,450           Sawyer         927,150         14,000           Sheboygan         2,000         3,000         1,000	941,150
Sneboygan 2,000   3,000   1,000	6,000
Trempealeau     4,000       Vilas     8,188,375       8,000     28,450       3,	4,000 219,825
Walworth 1,000	1.000
Washburn 18,000 1,000	1,000 19,000
Washington 6,000   8,400	9.400
Waukesha   8.000   2.000	5,000
Waupaca 8,000 12,200	20.200
Waushara 200 27,075 2,200	29,475 4,475
Winnehago     X.475   1.000	
Wood 150,600 17,700 25,000	100 000
Total 6.564,940 7.076,345 673,200 813,525 27,000 15,	198,300

### DISTRIBUTION OF FOREST PLANTING STOCK WISCONSIN RAPIDS NURSERY—1934

County	Camp	County Forest Planting	General Distribution	Total
Eau Claire	Globe Arbutus Petenwell, Finley City Point	439,000 282,700 647,000 222,800		439,000 232,700 647,000 222,800
Total		1,541,500		1,541.500

## STATE PLANTING PROJECTS

### 1933

### STATE LAND

Forest or County Camp	Acres	Norway Pine	White Pine	Scotch Pine	Jack	Norway Spruce	White Spruce	Total Trees
American Legion. McNaughton.	200	240,000 985,000				1 1 1 1 1		240.000 985.000
Brue Kaver Sand)	412.5	483.800		11.100	:	42,200		487,100
Northern State	386.4	354,835		17,240	112,300	15,065	1,150	500,090
Total planting on state land 1983	2,169.9	2,405,585		28,340	112,300	57.265	1,150	2,604,590

### COUNTY LAND

Burnett	Riverside	409.7	425,000			40.000			465,000
Est Claire	Arbutus Lake	360	160.000			228 650			888,000
Juneau	Petenwell	480	51.000		60,500	891,550			503,050
Marinette	Athelstane	180	230,200						230,200
Marinette.	Dunbar	429	90,000			460,000	:		220,000
Sawyer	Smith Lake	78.6	20,075	20.000			1	10,075	50,150
Fotal planting on county land 1933	1933	2,182.3	1,276,275	20,000	60,500	60,500 1,115,200		10,075	2,482,050
Total state planting 1933		4,352.2	8,681,810	20,000	88,840	88,840 1,227,500	57,265	11,225	5,086,640

## STATE PLANTING PROJECTS

STATE LAND

Forest or County	Сатр	Acres	Norway Pine	White Pine	Scotch Pine	Jack Pine	Norway Spruce	White Spruce	Total Trees
American Legion Brule River Northern State	McNaughton Brule CCC Crystal Lake	1,082 630 630	300,000 336,060 788,000	256, 555 75, 000	5,900	452.000 130,550 27,500	86,210	66,835 6,400	762,000 875,200 852,800
Northern State Northern State Northern State Copper Falls State Park	Mercer Mercer Star Lake	367 1,226 1,448	650,000 650,000 607,525 85,000	200,000 20,125 152,700 1,000	3,000	813,000 215,000 876,250	21,000	26,000 25,000 10,000 1,000	415,025 645,000 913,125 1,850,750 87,000
Total planting on state land 1984	78	5,901	2,721,615	705,880	80,725	2,471,525	811,485	166,236	6,405,700
			COUN	COUNTY LAND					
Burnett Douglas Eau Claire	Riverside Gordon Fairchild	1,031 800 79	228,850 800,000 10,000	296,000	25,000	425,950	205,740		1,156,040 875,000 95,000
Kau Claire Forest. Jackson.	Fairchild and Globe* Laona Arbutus Lake	362 942 254	399, 500 25, 875 140, 000	89,500 55,100 17,700		168.000	60,000	27,800	
Jackson Juneau Juneau	Arbutus Lake* Finley Petenwell	8218	180,000	20,000		117,800			
Juneau Langlade Lincoln Marinette	Fetenwell* Elcho Tomahawk Athelstane	200 200 301 301	802,000 141,230 184,140 45,000	40,000 113,700 189,600		82,900	154,900 85,000	141,870 85,000	
Marinette Oneida. Sawyer Wood	Atheistane* Dunbar Blue Lake Smith Lake	540 748 585 686 196	851,700 858,815 570,000 268,600 6,000	488,700		98,200 544,585 290,000	145,800	79,500	449,900 902,860 860,000 927,100 222,800
Total planting on county land 1934.	1984	6,681	8,792,210	1,478,000	26,000	2,287,485	680,940	288,170	8,461,805
Total state planting 1984.		12,632	6,518,825	2,178,880	55,725	4,759,010	892.426	448,405	14,857,505

Replanting.

### BIENNIAL REPORT

Part II-Section 4

		Total	Lands	1,385.27.	92,105.46 81,325.48	91,870.11	122,884.59	19,185.15	110,928.64	49,687.78	58,870.57	28,788.28	124,178.25	8,998.15	111,924.86	5,847.18	85,109.53 77,620.21	92.50 57,162.31	4,295.69	58,964.29	272.60 19,508.17	1,876,182.89
TIES			Net County Lands	14,700.68	84,118.54 29,858.61	88,004.56	120,039.52	17,947.78	49,428.40	48,828.58	58,210.57	14,471.44	128,486.76	8.998.15	87,511.24	4.686.53	29, 185, 40 68, 928, 56	87,622.18	2,677.27	28,095.64 58,081.67	12,889.51	1,123,745.48
COUNTIES			With- drawn	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	210.		8,778.81	9 691 75	1,681.73	.08	1,917.25	40	320.	7 601 98	120.	80.	520. 2,227.18	17,090.89	2,218.64	1,989.88	440.	50,600.56
NDS BY	COUNTIES	County Entries	1984	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4,815.80	88,004.56	31,141.85	17.947.78		26,876.77	99 699 51	9,231.44	18,041.70	8,998.15	47,397.88	4,716.58	6,222.68	1 1				292,084.58
CROP LANDS		Ğ	1988	14,700.68	22,781.96		448.09	80 600 08	61,006.13	22,081.76	15 7/8 90	5,280.	80,844.75	19 902	18,765.96		11,480.60	54,718.02		46,958.95	13,279.51	419,622.49
	OP LAND		Prior to 1933		67,226.78 80,153.78		97,233.89			* ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	55,127.82		75,420.81		26,467.90		18,224.80 57,345.78	1 1	4,890.91	18,117.05		462,639.02
FORESTRY-FOREST	FOREST CROP LANDS BY		Net Private lands	1,335.27	7,991.91 1,966.87	8,366.89 9,866.55	2,845.07	1,287.42	61,500.14	859.25	17 808 84	9,261.79	686.49	36 200	24.413.62	1,210.60	5,924.18 8,691.65	92.50	1,618.42	2,802.48 882.62	6,663.66	252,436.91
OREST		tries	With- drawn	2,202.24	4,812.24	1,157.20	11,346.35	2,320.	80,920.50	5,106.71	190	2,973.42	560.	1 875 96	13,670.07	160.	23,540.68	794.70	640.	2,304.b6 160.	226.14	180,820.68
	ENTRY OF	Private Entries	1984	1 1 1 1 1	1	285.55	.08	248	15,357.30		10 407 08						117.20	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				82,095.69
CO-OPERATIVE			1988	468.88		80.		8 991 98	5,733.55		9 639 46	240.			2,394.07	197.41	80.			90.	360.	21,847.60
ၓ			Prior to 1988	866.89 26,826.82	12,804.15 8,686.87	4,287.29	14,111.42	8,557.42	71,829.79	5,964.96	160.	11,995.21	1,246.49	9 878 19	35,689.62	1,370.60	29,384.81 8,988.94	20,334.88	2,258.42	1,042.62	6,303.66	829,814.30
		County	<b>Company</b>	Adams	Bayfield Burnett.	Clark	Douglas	Eau Claire	Forest	Iron	Juneau	Lincoln	Marinette.	Monroe.	Oneida	Polk	Price.	St. Croix	Taylor	Washburn	Wood	Total

### Part II-Section 5

### WISCONSIN EMERGENCY CONSERVATION WORK

### NUMBER AND LOCATION OF STATE CCC CAMPS AND NUMBER OF FEDERAL CCC CAMPS IN WISCONSIN

Camp No.	Location	First Period April 1, 1988 to Sept. 81, 1988	Second Period Oct. 1, 1938 to March 81, 1984	Third Period April 1, 1934 to Sept. 31, 1934
	State Forest Camps			į
51-S	Necedah	x	x	
52-S	Merrillan	x	x	x
58-S	Danbury	x	I	x
54-S	Hayward	x	x	x
56-S	Phillips	· <b>x</b>	x	x
57-S	Crandon	x	x	x
74-S	Boulder Junction	x	x	x
75-S	Minocqua	x	x	x
77-S	Brule	x	x	x
79-S	Manitowish	X	x	x
88-S	Fairchild			x
84-S	Tomahawk		x	x
85-S	City Point			X .
86-S	Merrill			<u> </u>
87–S 89–S	Finley		 x	X X
89-5 90-8	Upson Dunbar	Ī	X	l ŝ
90-8 91-8	Elcho	x x	l 🛣	l î
91-S 92-S	Star Lake		î î	l î
92-S 98-S	Glen Flora	-x	î x	•
90-8 94-8	Fairchild	â	â	
95-S	Camp Douglas		i i	i :-
81-S	Long Lake		x	
Tot	al state forest camps	14	19	19
	State Erosion Camps			
PE-60	Durand	x		x
PE-61	Gilmanton	x		x
PE-68	Independence	x		x
PE-64	North Bend	x		X X
PE-71	Evansville	x		
PE-72	Lancaster	x		
PE-78	Darlington	x		- <del>-</del>
PE-96 PE-97	West Salem	x		🚡
PE-97 PE-98	Bloomington			1 1
PE-99	Mount Horeb	- <u>:</u>	l <u></u>	1
Tot	al state erosion camps	9		8
				07
TOTAL ST	ate camps	28	19 20	27 19
Donard:	States Forest Service camps	21 8	20	13
Tot	al CCC camps in Wisconsin	47	43	52

### WORK ACCOMPLISHED BY STATE CCC CAMPS FROM JUNE 1, 1933 TO OCTOBER 31, 1934

Project	Total
Telephone lines	1,150 miles
Fire breaks	154 miles
Reduction of fire hazard	9.426 acres
Roadside clearing—fire prevention.	875 miles
Trailside clearing—fire prevention	876 miles
Lookout houses.	12
Lookout towers	31
Pighting found Space	83.310 man day
Fighting forest fires	86.478 man day
Consolidation and protection work.	464 acres
General cleanup other than fire prevention	
Forest stand improvement	7,985 acres
Truck trails	1,022 miles
Minor roads and trails	56 miles
Bridges	155
Dwellings, offices, garages, and other structures	156
Public camp ground buildings and other facilities	82
Public camp ground clearing	821 acres
Fences	56 miles
Planting	16,789 acres
Nursery work	7,917 man day
Seed collection—Conifer (cones)	586 bushels
Hardwood and other	9,881 pounds
Rodent control	1,861 acres
White pine blister rust control.	30,351 acres
Survey—lineal	1,124 miles
Survey—topographical	49.658 acres
Survey—timber estimating and other	78.440 acres
Water improvement—lakes and ponds	7.621 acres
Water improvement—streams	125 miles
Landscaping	552 acres
State Erosion Camps	
•	
Soil saving dams	780
Terraces laid out	318 acres
Erosion planting	200 acres

## Part II—Section 6

### STATE PARKS

## WISCONSIN STATE PARKS

		1	100	ļ	2	Address of Deals	How	How Reached
Name of State Park	4	(County)	(Acres)	Acquired	Estab.	Address of Fark Custodian	Highway	Railroad
Interstate		Polk	280	Purchase	1900	St. Croix Falls	35, 8, 87	800
Pentraula Devil's Lake Cuching Memorial Nebon Dewey Perrot		Door. Sauk Waukesha Grant Trempealeau	3,400 1,400 1,671 1,010	Purchase Purchase Gift Purchase Gift	1910 1911 1915 1917 1918	Fish Creek Baraboo *Delafield Wyshusing *Trempealeau	42 12, 118, 159 18 86, 60, 18 167	C. B. W. W. W. St.P. d. W. St.P. d. W. St.P. d. W. St.P. d. W. St.P. d. W. St.P. d. W. St.P. d. W. W. W.
Pattison Tower Hill First Capitol Rib Mountain		Douglas Iowa Lafayette Marathon	27 28 28 28 28	3353	1920 1922 1924 1927	Brule Spring Green Felmont	85 11 118, 80 51, 29	Burlington Soo C. M. St. P C. & N. W
Potawatomi Terry Andrae Copper Falls		Door Sheboygan Ashland Buffalo	1,046 112 520 281 291	Purchase Gift Purchase Gift	1928 1928 1929 1982	Fish Creek Sheboygan Melen Frountain City	42, 57 141 13, 77 85, 96	CO. E. W. W. CO. W. W. W. W. W. W. W. W. W. W. W. W. W.
Roadside parks New Giarus Woods Ojlbws. Rocky Arbor		Green Sawyer Juneau, Sauk	40 126 288	Purchase Gift Purchase	1984 1984 1984	* * *Wisconsin Delis	69 12 12	
* No resident park custodian.								

# STATE PARK ATTENDANCE RECORD

### 1934

Name of Both	April	72	May	2	L.	Tune	-5	Tuly	August	¥	September	n ber	October	30	Ę	Ē
Name of Cark	Persons	Cars	Persons	Cars	Persons	Cars	Persons	Carr	Persona	Cars	Persons	Carre	Persons	Cars	Persons	Cars
5		:										1		1		
Copper Falls Cushing Memorial	88	35	25.25	38	292	24.58 28.58	3.118	1,210	2,180	1,88 57,8	2,087	180	- 56	22	8.317	2 64 2 68 2 68
Devil's Lake	9.720	2.680	42,200	10,400	72,320	18,080	183,950	46,350	174,200	40,850	37,680	9.120	12,920	3,210	542,990	130,690
First Capitol	8 3	88	200	25	3	88	88	200	8:	25	8	22.	28	8	S. 5	98.
Merrick	£ 5	3 8	330	2,4/2	25	220	25.8	736	8 052	2.28	38.5	751	200	3 2	32.50	7.390
Nelson Dewey	1.600	\$	3,956	886	1.588	1.147	990	2.264	99.66	3 434	7.638	1,917	3,828	298	40,322	11,158
Pattison	1,350	90	5,118	2,051	15,780	4,598	18,230	4.460	11.677	2.978	9.180	2,460	6,540	008	67.875	18,745
Peningula	3	8	3,808	88	8,339	1.987	16.963	5,671	27,333	8,54	4	<u>2</u>	200	8.	67.482	20.17
Perrot	300	2	200	2	28,	8	20,08	483	300	210	8	8	8	\$	8,418	2,178
Potawatomi	38	3	86.	200	386		26 26 26 26 26 26 26 26 26 26 26 26 26 2	3.183	17.865	86	2,189	201	99	35	25.	11.375
Terre Andres	3.8	140	9,18	400	96	1980	19 880	9.140	200	000	200	85	7,000	355	25.167	7.613
Tower Hill.	1.250	325	2,318	222	3,632	2	6,052	8.	6,126	1.767	3.942	1,096	2,113	24	26,432	986
Total	21,218	5,998	94.374	24.079	148,448	35,890	322,824	79,802	300,494	76,181	96,474	24.780	44,888	11,202	1,028,720	257,932

Part II—Section 7 FISHERIES

PRODUCTION OF FISH BY HATCHERIES

	1933		19	1984
	Total Species	Total Production	Total Species	Total Production
Bayfield Brook trout fingerling	1,156,450		1,373,400	
Brook frout adult. Brown trout fingerling. Brown trout adult. Lake trout fry. *Fish and eggs seen away.	1,335,750	7,960,200	862,200 266 1,744,000	3,981,636
Brule Brook trout fingerling. Brook trout yearling Brook trout adult.	170,000		53,550 282 71	
Kumbow trout yearling. Brown trout fingerling.		170,000	73,500	141,470
Burlington Wal-eyed bike fry Black bass fingerling Perch fry Perch fry Perch fingerling Pickete fingerling Pickete fingerling	35,175,000 268,700 5,775,000 4,500 4,200	41,227,525	8,925,000 21,300 5,000,000	13,946,300
Deerbrook Brook trout fingerling	125,500	125,500	75,600	75,600
Delafield Wall-eyed pike fry Wall-eyed pike fry Perch fry Perch fry Back base fragerling Black base fragerling Black base actual Black base actual Black base actual Roach fragerling	46, 200, 000 4, 225, 000 13, 950 71, 000		17,325,000 5,080,000 109,100	

Eagle River Wall-eyed pike fry	64,715,000	64,715,000	89,875,000	89,875,000	
Eau Claire Brook trout fingerling. Brown trout fingerling. Rainbow trout fingerling. *Fish and eggs sent away.	648,200	914,050 85,000	683, 380	981,680	
Haugen Wall-eyed pike fry	18,000,000	18,000,000	88,400,000	38,400,000	
Hayward Wall-eyed pike fry. Muskeliunge fry. Brook frout fingerling. Brown trout fingerling. Rainbow trout fingerling.	98,600,000 10,000 92,800 48,000 25,600	98,776,400	88,800,000 240,000 89,875 21,825	89,151,200	
island Lake Wall-eyed pike fry Muskellunge fry	1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	6,000,000	8,040,000	
Madison Brown trout fingerling Brown trout yearling Brown trout dault Rainbow trout fingerling Rainbow trout adult Rainbow trout adult Rainbow trout adult Rainbow trout adult Fish and eggs sent away	686,600 125,100 10,625	826,000 726,000	1,007,400 12,660 12,600 65,000 10,890	1,096,250 1,268,898	
Deceols Brook trout fingerling Brook trout yearling Brook trout shalling Brown trout definit. Brown trout ingerling Rainbow trout ingerling	1,205,500 5,800 8,968	1 900 F	837,275 6,000 6,000 104,800 104,800	98	
Fish and eggs sent away.  Rest Lake Wall-eyed pike fry. Wall-eyed pike fry.	27,000,000	8,569,680	10,800,000	4,623,865	
St. Croix Falls Brook trout fingerling. Brook trout yearling.	1,227,150		1,208,400		

PRODUCTION OF FISH BY HATCHERIES—Continued

	1983		13	1984
	Total Species P	Total Production	Total Species	Total Production
St. Croix Falls—Continued. Brown trout fingerling. Rainbow trout yearling. *Fish and eggs sent away.	717,500	2,028,700 1,182,800	130,800	1,411,060
Sheboygan Lake trout fry Lake chub fry	6,417,000	6,417,000	8,675,980 760,000	4,435,980
Spooner Wall-eyed pike fry	14,700,000	14,700,000	19,425,000	19,425,000
Sturgeon Bay Perch fry Lake trout fry	18,875,000 15,400,000	88,775,000	8,000,000	10,000,000
Wearfield Brook trout fingerling Brook trout yearling Brown trout fingerling Rainbow trout fingerling Flainbow trout fingerling	565,800 11,800 190,000	767,600 27,800	315,000	533,290 33,650
Wild Rose Brook trout fingerling	172,900		161,600	
Brook trout shaling.  Brown trout fingerling.  Brown trout paniling.  Brown trout shaling.	20,640 1,058,660 9,370 26,252		20,000 1,840,500 15,880 1,400	
Rainbow trout fracting. Rainbow trout yearling. Rainbow trout adult. Lake trout fry. Sturgeon adult. Flah and eggs sent away.	8,000 24,080 85,000	1.849.842 839.842	806,000 1,276 100,000 26,000	1.972.676 8.948.676

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Woodruff Wall-cyed pike fry Wall-cyed bike fingerling Wall-cyed bike fingerling Muskellunge fingerling Pickerel fingerling	47,250,000 1,440,000 210,000		47,250,000 2,205,000 1,050,000 682 1,050,000	
Black bass fingerling Lake trout try Blue gill fingerling. Perch fingerling	127,400	49,795,484	68,000 190,000 4,000 195,000	50,958,207
Mississippi river Black bass fingerling distributed Bullhead ingerling distributed Miscelaneous ingerling distributed Returned to river	193,510 266,000 185,800 16,938,756	17,584,066	21,527 92,000 815,089 886,607	765,228
De Soto pond Miscellansous fingerling	68,750	63,750		
Neenah White bass fingerling	2.598.600	2,598,600		
Wisconsin River Miscellaneous flab			578,148	678,148
Miscellaneous fah.	989,400	989,400	722,882	722,382
High Falls rearing ponds Brook trout fingerling. Brown trout fingerling.			80,000 180,000	210,000
Total fish production.		436,958,830		320,903,585

*Note: This total includes fish and eggs sent to other hatcheries to be distributed. They are included in the output of the hatcheries receiving them.

# FISH DISTRIBUTION BY SPECIES

200

2,774,080         33,084         1,900         80,500         1,400         21,74,080           9,081,840         33,084         11,400         226,206         455,260         13,000         13,000         13,000         13,000         13,000         13,000         13,000         13,000         13,000         13,000         13,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,000         14,	2,774,000         38,084         1,960         80,500         14,00         15,000         21,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000	County Wall-eyed	Pickerel	Muskel- lunge	Perch	Black Bass	Brook	Brown	Rainbow	Lake	Gills	Bull- heads	White	Miso. Panfish	Mise. Res- cue Fish
9, 277, 080         33, 084         10, 300         20, 000         17,000         6, 465,000         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800         1, 800	9.2.774, 0.60         3.3.084         10,508, 220, 190         43,250         1,000         51,000         51,600         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500         1,500 <t< td=""><td>209,700</td><td></td><td></td><td></td><td>1,900</td><td>80,500</td><td>1.400</td><td>15,000</td><td></td><td>-</td><td>*********</td><td></td><td></td><td>20,000</td></t<>	209,700				1,900	80,500	1.400	15,000		-	*********			20,000
8 30 730         3 789 735         12 180         220 160         4 25 600         5 46 500         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180         1 180<	8, 381, 70, 72, 325, 300         8, 7, 92, 324, 300         15, 180         220, 190         435, 280         6, 466, 000         17, 800         17, 800         18, 900         18, 900         18, 900         19, 250         19, 900         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125			33,684	*************	6,368	268,000	90,000	21,000						1.350
8, 391, 710         8, 391, 710         8, 392, 725         15, 460         17, 488         17, 250         18, 000         11, 125         10, 000         94, 250         10, 000         94, 250         10, 125         3, 450         10, 125         10, 125         3, 450         10, 125         10, 125         3, 450         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125	8, 391, 710         8, 391, 710         8, 391, 710         1, 592         10, 000         94, 250         10, 000         94, 250         3, 450           2, 739, 100         2, 739, 100         3, 730         1, 592         10, 000         94, 250         3, 450           2, 739, 100         6, 575, 625         33, 700         1, 54, 94         15, 399         17, 625         3, 450           2, 730, 000         1, 2, 72, 430         1, 2, 72         1, 200         1, 200         1, 10, 125         3, 750           1, 153, 350         1, 100         1, 100         1, 2, 000         1, 3, 000         1, 10, 125         3, 750           1, 153, 350         1, 100         1, 100         1, 200         1, 3, 00         1, 5, 00         1, 10, 125         3, 750           2, 226, 700         1, 1153, 350         1, 100         1, 3, 00         1, 5, 00         1, 5, 00         1, 5, 00         1, 5, 00         1, 10, 00         1, 5, 00         1, 10, 00         1, 10, 00         1, 10, 00         1, 10, 00         1, 10, 00         1, 10, 00         1, 10, 00         1, 10, 00         1, 10, 00         1, 10, 00         1, 10, 00         1, 10, 00         1, 10, 00         1, 10, 00         1, 10, 00         1, 10, 00         1, 10, 00         1, 10, 00 </td <td></td> <td></td> <td></td> <td></td> <td>12,180</td> <td>220,190</td> <td>435,250</td> <td></td> <td>5,468,000</td> <td></td> <td>1</td> <td>1 800</td> <td></td> <td>250,000</td>					12,180	220,190	435,250		5,468,000		1	1 800		250,000
8, 391, 725         8, 789, 725         8, 789, 725         1, 582, 200         15, 582, 200         15, 582, 200         10, 000         11, 625         3, 450         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125         10, 125 <t< td=""><td>8.391.710         8.3784.725         8.391.710         8.280         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         <t< td=""><td></td><td></td><td></td><td>-</td><td></td><td>65,180</td><td></td><td>13,000</td><td></td><td></td><td></td><td>Ano'r</td><td></td><td></td></t<></td></t<>	8.391.710         8.3784.725         8.391.710         8.280         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250         17.250 <t< td=""><td></td><td></td><td></td><td>-</td><td></td><td>65,180</td><td></td><td>13,000</td><td></td><td></td><td></td><td>Ano'r</td><td></td><td></td></t<>				-		65,180		13,000				Ano'r		
8.391.710         8.325.000         21.326         10.000         94.250         10.125         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450         3.450	8.391.710         8.391.710         8.391.710         8.391.710         8.391.710         8.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710         9.391.710 <t< td=""><td>100</td><td></td><td></td><td></td><td>5.460</td><td>157,488</td><td></td><td></td><td>-</td><td>-</td><td></td><td>-</td><td></td><td></td></t<>	100				5.460	157,488			-	-		-		
2,573,9,100         2,573,000         1,572,439         14,815         17,625         3,450         15,100         10,125         3,450         5,400         10,125         3,450         5,400         10,125         3,450         5,400         10,125         5,400         10,125         5,400         10,125         5,400         10,125         5,400         10,125         5,400         10,125         5,400         10,125         5,400         10,125         5,400         10,125         5,400         10,125         5,400         10,125         5,400         10,125         5,400         10,125         5,400         10,125         5,400         10,125         5,400         10,125         5,400         10,125         5,400         10,125         5,400         10,125         5,400         10,125         10,125         10,125         10,125         10,125         10,125         10,125         10,125         10,125         10,125         10,125         10,125         10,125         10,125         10,125         10,125         10,125         10,125         10,125         10,125         10,125         10,125         10,125         10,125         10,125         10,125         10,125         10,125         10,125         10,125         10,125 <t< td=""><td>2,373,9,100         2,373,9,100         2,334,250         44,875         17,845         17,845         17,845         17,845         17,845         17,845         17,845         17,845         10,135         110,135         10,135         10,135         10,135         10,100         10,135         10,135         10,100         10,135         10,100         10,135         10,100         10,135         10,100         10,135         10,100         10,135         10,100         10,100         10,135         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100</td><td>9</td><td></td><td></td><td></td><td>8,820</td><td>208,150</td><td></td><td>94,250</td><td></td><td>-</td><td></td><td></td><td></td><td>17,747</td></t<>	2,373,9,100         2,373,9,100         2,334,250         44,875         17,845         17,845         17,845         17,845         17,845         17,845         17,845         17,845         10,135         110,135         10,135         10,135         10,135         10,100         10,135         10,135         10,100         10,135         10,100         10,135         10,100         10,135         10,100         10,135         10,100         10,135         10,100         10,100         10,135         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100         10,100	9				8,820	208,150		94,250		-				17,747
6,575,025         325,000         21,331         1,025         140,250         15,000         4,040         5,400         2,000         4,040         5,400         2,000         4,040         5,400         2,000         10,125         5,400         3,000         10,125         5,400         3,000         3,750         5,400         3,750         5,400         3,750         5,400         3,750         5,400         3,750         5,400         3,750         5,400         3,750         5,400         3,750         5,400         3,750         5,400         3,750         5,400         3,750         5,400         3,750         5,400         3,750         5,400         3,750         5,400         3,750         5,400         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750         3,750	6,575,025         2,575,025         2,532,000         21,331         1,025         10,135         10,135         10,135         10,135         10,135         10,135         10,135         10,135         10,135         10,135         10,135         10,135         10,135         10,100         3,730         4,000         3,730         4,000         3,730         4,000         3,730         4,000         3,730         4,000         3,730         4,000         3,730         4,000         3,730         4,000         3,730         4,000         3,730         4,000         3,730         4,000         3,000         22,200         2,000         3,000         3,730         4,000         3,000         3,000         3,730         4,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000		-			308	64,875	18.959	17.625	************			3,450		364,289
6,575,625 2,102,000 2,102,000 12,102,000 12,102,000 12,102,000 12,102,000 11,153,350 11,153,350 11,153,350 11,153,350 11,153,350 11,153,350 11,153,350 11,153,350 11,153,350 11,153,350 11,153,350 11,153,350 11,153,350 11,153,350 11,150 11,153,350 11,150 11,153,350 11,150 11,153,350 11,150 11,153,350 11,150 11,153,350 11,150 11,153,350 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11,150 11	6,575,625 2,162,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3,51,000 3	- 1						83,300	15,000	-		*******		*******	5,645,252
2,102,000         2,102,000         12,572,430         1,518         15,100,000         37,750         37,750           6,300,600         351,350         1,200,000         13,100         13,500         13,500         22,2,500           1,153,350         1,153,350         1,500         1,500         1,500         22,2,500           1,153,350         1,153,350         1,500         1,500         22,2,500         22,2,500           1,153,350         1,150         1,000         13,500         1,500         22,2,500           2,206,700         3,140         1,000         1,500         1,000         1,772           2,206,700         3,11,400         1,000         1,000         1,500         1,500           3,11,400         1,11,400         1,000         1,000         1,500         1,500           4,11,400         1,11,400         1,11,400         1,11,400         1,11,400         1,11,400           2,103,140         1,11,400         1,11,400         1,11,400         1,11,400         1,11,400         1,11,400           2,103,140         1,11,400         1,11,400         1,11,400         1,11,400         1,11,400         1,11,400           3,104         1,11,400         1,11,40	2,102,000         2,102,000         1,572,430         1,848         1,848         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810         1,5810	1			325,000	21,331	1,025	53 700	21,925		-	200 000	4 0.0	5.400	000' 0
6,930,650	6,930, 630         6,930, 630         6,930, 630         6,930, 630         12,810         185,7815         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230         186,230 <td>11</td> <td></td> <td></td> <td>12,572,430</td> <td>1,848</td> <td></td> <td>001100</td> <td></td> <td>15,400.000</td> <td></td> <td></td> <td>3,750</td> <td></td> <td></td>	11			12,572,430	1,848		001100		15,400.000			3,750		
1,153,350   1,000   1,470   1,470   1,000   13,100   13,100   13,100   13,100   13,100   13,100   13,100   13,100   13,100   13,100   13,100   13,100   13,100   13,100   13,100   13,100   13,100   13,100   13,100   13,100   13,100   13,100   13,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1,100   1	351 3.00         351 3.00         1 470 20.02         13.00         13.00         2.22.800           2 926 700         2 730 400         15.850         1.500         2.22.800         2.22.800           421 400         421 400         15.800         15.800         2.000         22.800         7.72           2 025 700         115.500         115.500         22.000         22.800         7.72           2 025 700         115.500         15.800         15.80         10.000         7.72           2 025 700         115.500         115.80         11.000         22.000         7.72           2 025 700         114.80         11.00.90         22.000         11.00         11.00           3 0.000         11.000         11.000         11.00         11.00         11.00           3 0.000         11.000         11.00         11.00         11.00         11.00           3 0.000         11.000         11.00         11.00         11.00         11.00           3 0.000         11.000         11.00         11.00         11.00         11.00           4 0.00         11.000         11.00         11.00         11.00         11.00           4 0.00         11.000 </td <td>9</td> <td>-</td> <td></td> <td>-</td> <td>12,810</td> <td>187,815</td> <td></td> <td>99 500</td> <td></td> <td></td> <td></td> <td>***************************************</td> <td></td> <td>99 500</td>	9	-		-	12,810	187,815		99 500				***************************************		99 500
1,153,350         2,26,700         4,500         138,550         1,500         22,500           2,26,700         4,000         16,300         115,550         4,000         22,500         77,550           4,21,400         72,61         13,800         10,800         14,000         22,000         77,725           11,450         72,033,948         77,81         13,800         13,775         33,504         77,725           1,31,400         1,326,000         1,326,000         84,150         7,650         80,000         1,500           2,023,740         1,326,000         6,502,470         12,800         60,000         1,500         1,500           1,348         17,200         32,900         12,800         12,800         12,800         1,500         1,500           1,377,400         1,486         12,800         12,800         12,800         1,500         1,500           1,486         1,500         1,500         1,500         1,500         1,500         1,500           1,486         1,500         1,500         1,500         1,500         1,500         1,500           1,486         1,500         1,500         1,500         1,500         1,500         1,500	2, 225, 730         4, 000         138, 850         1, 500         22, 800         22, 800           2, 225, 700         4, 000         115, 550         10, 800         13, 550         10, 000         13, 550         17, 725           314, 550         13, 450         10, 800         13, 755         13, 550         10, 800         7, 725         17, 725           2, 033, 048         119, 400         13, 756         13, 500         13, 500         13, 500         17, 725           4, 150         2, 033, 048         11, 400         11, 600         12, 500         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600         11, 600	1.3				1,470	206,420	190,000	113,100					-	3,004
2,205,700         4,000         4,000         4,000           4,214,400         776         10,800         49,000         22,000           314,550         776         13,800         13,775         3550         30,000         7,725           2,033,948         82,800         84,150         7,650         80,000         7,725         7,725           2,033,948         1,926,000         94,200         23,504         94,200         1,800         1,800           2,035,700         1,926,000         66,502         12,800         56,002         64,000         1,800           3,356,700         1,926,000         66,502         12,800         56,000         1,800         1,800           1,488         1,500         12,800         56,000         1,800         1,800         1,800           1,488         1,489         1,800         11,800         1,900         1,600         1,800           1,488         1,489         1,600         1,600         1,600         1,600         1,600           1,488         1,489         1,600         1,600         1,600         1,600         1,600           1,489         1,600         1,600         1,600         1,600	2 226 700 314 550 314 550 314 550 31 500 314 550 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31 500 31	4				2 730	4 000	138 850	1.500		-		22,800		1,425
421 400 314 550 2 .033 948 2 .033 948 2 .033 948 2 .033 948 3 .030 2 .035 700 3 .036 700 2 .035 700 3 .036 700 3 .036 700 3 .036 700 2 .037 450 3 .036 700 3 .036 700 3 .036 700 4 .037 450 4 .037 450 4 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030 1 .030 9 .030	2 (83 948 1 350 2 (83 948 1 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3					6,300	115,550					*******		*******	1,200
414 500         41 500         799         13 380         13 775         50 000         7 725           2 003 948         2 003 948         22 500         23 504         44 150         7 650         30,000         7 725           4 129 400         2 003 70         2 00 46         23 504         23 504         44 100         1,000         1,800           2 003 700         1 200 000         1 200 000         22 500         22 500         20 000         1,800         1,800           2 5 00 000         1 200 000         1 200 000         20 000         20 000         20 000         20 000         20 000         20 000         20 000           1 488         4 378         1 5 000         31 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000         2 000 <td< td=""><td>2,033,948         3,000         3,000         3,000         7,725         3,500         7,725         3,500         1,772         3,000         1,725         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000</td><td></td><td>-</td><td></td><td>***************************************</td><td>308</td><td>10 000</td><td>100,500</td><td></td><td></td><td>********</td><td></td><td></td><td>-</td><td>900.9</td></td<>	2,033,948         3,000         3,000         3,000         7,725         3,500         7,725         3,500         1,772         3,000         1,725         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000		-		***************************************	308	10 000	100,500			********			-	900.9
2 033 944	2,003,948         308         308         81,500         7,650         7,650         64,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         <					796	13,380	13,775		30,000			7.725		
419 400 2 (258 750 2 (258 770 3 (356 700 4 (378 450 4 (378 45	4 19 400 2 428 750 2 428 750 3 456 700 3 456 700 3 456 700 4 450 400 4 450 4 450 400	15			-	808	12,600	84,150							4,500
2,025,750         2,025,750         2,026,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000         1,000	2,025,780 3,356,700 1,206,000 1,306,000 1,306,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1,40,000 1	•					94,250								6.750
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# FISH DISTRIBUTION BY SPECIES

1934

Wall-eyed Pike	Piekerel	Muskel- lunge	Perch	Black Bass	Brook	Brown	Rainbow	Lake	Lake	Stur- geon	Blue	Roach	Misc. Res- cue Pish	Total
112,860		27.2.72		2,764	55,600	42,190					006			213,414
8		010,10		-	992 660	55 125	8 800				200	-	-	13 149 513
22	0				419,122	527,329	i	1,744,000						7,772,671
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000				4,000	51,950	35,240								91.190
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3,470,445	9	80	21,000	4,312		130,094	28,070					250	95,721	3,749,972
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12,460,220	0				70,332	65,071	27,067						000	12.622.690
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296,630	0				36,170									1,332,800
996 830		-		2,192	92 880	44,150	4 400		-	-	-	-		1 393 910
1				2,000		180,172	41,200						95,521	318,893
1				588	15,000	21,100		000 000		16			2 916	36,688
13				784	000'6	113 222	3.660	100,000		10		-	95,521	213,187
326,320	0	296.448			129,520		-				009			10,752,888
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020, 100,			000,12	1.000	18.560	noo'er	-			-		7,000		19,560
646,480	0		1,333,300	4,140							*******	*********	*********	4,983,920
13			***************************************		92.040	25,920	-						104 185	25,920
10				1,176		13,440	000				-		2011001	15,576
276,360	129,200	43.650		3,000	64,890									3,517,070
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# BIENNIAL REPORT

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		291.015				48 450		**********					08 900	20,000		**********	193,800				145,350			1 050 065 4 665 592
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Marinette	Milwaukee	Oconto	utagamie	Penin	lerce.	Portuge	rice	Kacine.	oek	Rusk	St. Craix	auk	Shawano	Shebovzan	aylor	rempealeau	VIlas	Walworth	Washington	Waukesha	Waupada	Winnebago	poo	Total

# DISTRIBUTION OF FISH BY SPECIES AND SIZE

Species and size	1	988	1	934
Species and size	Distribution by Species	Total Distribution	Distribution by Species	Total Distribution
Wall-eyed pike fry Wall-eyed pike fingerling	846,640,000 86,918	846,676,918	276,800,000 25,601	276,825,601
Black bass fingerling	889,675	839,675	880,679 544	381,223
White bass fingerling	2,637,884	2,687,834	1,691	1,691
Rock bass fingerling	82,588	82,538	47	47
Calico bass fingerling			230	230
Muskellunge fry Muskellunge fingerling	1,850,000 89	1,850,089	4,665,000 605	4,665,605
Perch fryPerch fingerling	28,875,000 829,858	28,704,858	12,080,000 230,656	12,310,656
Pickerel fry Pickerel fingerling	210,000 48,985	253,985	1,050,000 1,987	1,051,987
Roach fingerling	6,200	6,200	75,850	75,850
Bluegill fingerling	545,657	545,657	118,248	113,248
Lake trout fryLake trout fingerling	28,053,000 35,000	28,088,000	18,709,980 26,000	13,785,980
Crappies fingerling	1,857,099	1,857,099	418,458	418,458
Lake chubs fry			760,000	760.000
Sunfish fingerling	891,882	891,882	401,874	401,874
Bullhead fingerling	9,958,681	9,958,681	802,280	802,230
Catfish fingerling	27,020	27,020	6,482	6,482
Sturgeon adult			36	36
Brook trout fingerlingBrook trout adult	5,864,800 57,258	5,421,553	4,827,580 32,117	4,859,647
Brown trout fingerlingBrown trout adult	8,846,450 85,622	8,882,072	4,265,280 80,577	4,295,857
Rainbow trout fingerlingRainbow trout adult	677,800 109,880	787,180	497,625 180,552	<b>628</b> ,177
Miscellaneous fish	4,448,149	4,448,149	74,206	74,206
Total distribution		486,958,880		820,908,585

# BROOK, BROWN, RAINBOW TROUT DISTRIBUTED TO REARING PONDS

Tombi		1988			1984	
Location	Brook	Brown	Rainbow	Brook	Brown	Rainbow
araboo	7 000		ļ	00 000		
arneveld	7,000	10,000		20,000	18,000	1,200
arron	20,000					
eaverelleville		18,000	2.500	5,000	12,000	
lack Earth	1,000					
lackwell Jctlanchardville			120,000*		1.200	960
loomington					1,680	800
lue River	25,000	12,000			85,000	
hippewa Falls				60,000 20,000		
randon	12,250					
rivitz		105,000*	128,000*	5,000	20,000	
odgeville	9,600 8,750 60,000	8,000				
agle Riverau Claire	8,750			20,000	•••••	<b></b> -
ndeavor	60,000				40,000	
resham	5,000					24,000
Iudsonuds		50,000			50,000 2,800	
advamith		20,000		20,000		
aFarge	10.050	8,000		25,000	10,000	<b></b>
aonaodi	12,250	6.000		25,000	18,000	
one Rock		6,000 2,000			l	
Andison	40,000			70,000	900	2,100
Aineral Point				10,000	2,010	
Mondovi	25,000					
Monroe	8,000	14,000	5,000	15,000	1,800 16,800	
fount Horeb					15,000 60,000	
fuscoda	4,000			15,000	60,000	900
lew London	10,000			15,000	80,000	12,500 1,020
Park Falls				<u></u>		1,020
embine	21,000			6,000 85,000		
ine River		77,500			54,000	21,00
Platteville Plymouth	15,000	18,000		20,000	5.000	
ortage	15,000			10,000	3,000	
Postville			2,500			
Cound		82,000		6,000		
Reedsburg	18,000	7,000		10,000	18,000	
Richford Richland Center		25,000			28,000	21,00
Ridgeway	8,000	25,000			28,000	2.46
lio			5,625			
River Falls		100,000 70,200		20,000	97,200 20,000	
Sheboygan		1	5,000			
parta tevens Point	25,000	50,000				·]
Stoughton	25,000					1,20
Thorne				II	20,000	
Three Lakes Tilleda		52,000		20,000	50,000	
Tomahawk	8,750		.	15,000		
Washburn Washaca	14,000	48,200	.		60,000	·   - <b></b> -
Waupaca Wausau	58,000	27,000			28,000	
<b>Wautoma</b>	25,000	27,000 49,500			.	.
Whitehall		7.000	7,500			
			-	-		
Total	445,600	806,400	271,125	417,000	704,890	88,64

# ADULT TROUT DISTRIBUTION

County		1988			1984	1
County	Brook	Brown	Rainbow	Brook	Brown	Rainbow
AshlandBarron	820		<b></b>	888	187	
Bayfield	820			1, <b>3</b> 82 65	129	
Dane	555				200 71	
DouglasGreen					200	
Jackson Langlade	1,600 400					
Lincoln	1,200				1,100	900
OutagamieSt. Croix	1,868		30		100	225
Waushara		817	600		200	150
Total	5,768	817	680	1,835	2,187	1,275

# CLAMMING REPORT 1933

County	Number of pounds	Value	Unsold
Buffalo		\$ 145.10	
Crawford		1,102.81	80,000
Dodge	. 300		300
Grant	8,675	86.70	
Green Lake		980.46	- <b>-</b>
Kenosha	. 7,252	141.51	- <b>- </b>
La Crosse	84,000	204.00	- <b></b> -
Lafayette	8,020	42.00	<b></b>
Marquette	19.461	185.96	
Outagamie	82,495	881.95	
Pepin		1.801.60	
Pierce		654.55	
Polk.			6,000
Portage		58.46	
Racine		264.90	
Rock	400,400	9.479.94	41,500
St. Croix		1.045.00	
Vernon		148.11	
Washburn	15,380	289.55	
Waupaca		8.468.25	18.000
Waushara	84.880	487.25	-0,000
Winnebago		1.645.70	19,000
Wood		40.95	15,000
Total		\$22,499,25	114.800

# Part II—Section 8

## **GAME**

## DISTRIBUTION OF GAME BIRDS AND EGGS

Birds and Eggs	1982	1988	1984*
English ring-neck, Mongolian, and Mutant pheasants	8,648	9,558	
Game bird eggs	29,984	91,822	91,285
Birds distributed from the game bird eggs	9,975	27,717	
Valley, Chukar, and Hungarian partridge, bob- white quail, wild turkey, mailard duck, and bantam birds.	448	1,008	•••
Co-operator breeding pens (Birds furnished by department) Eggs	17,260	10,776	
Birds distributed from these eggs	5,024	4,224	

^{*1934} figures not completed

## TOTAL 1932 GAME KILL BASED ON CENSUS TABULATION

Species	Number killed
Cottontail rabbit	2.474.125
Snowshoe rabbit	631.007
Jack rabbit	21.118
Gray squirrel	562.845
Fox squirrei	291.125
Black squirrel	4.878
Red squirrel	162.87
Ruffed grouse	817.007
Prairie chicken and sharp-tailed grouse.	123.01
Rails	2.61
Jacksnipe	94.606
Mellard	192.902
Black duck	20.807
Green winged teal	60,60
Blue winged teal.	50.60
Pintail	22.81
Coot.	385.120
Widgeon	15,00
Canyasback	57.80
Redhead	28.10
Greater bluebill	104.010
Lesser bluebill	74.206
Any other duck	11.410
Canada goose	8,80
Snow goose	60
Blue goose.	401
Any other goose.	689
All other small game.	78,94
Bobeat	1,148
Red fox	1,21
Gray fox	2.508
Raccoon	7,44
Opoesum	4.101
VPV	-, 10
Ring-neck pheasant	40.450
Hungarian partridge	10.926
Bobwhite quail	551
Deer	86,009
Total estimated kill of all species	5.835.807

# TOTAL 1933 GAME KILL BASED ON CENSUS TABULATION

Species .	Number killed
Cottontail rabbit	2.338.36
	506.72
Snowshoe rabbit	18.20
Jack rabbit	
Gray squirrel	490,32
Fox squirrel	259,42
Red squirrel	123,14
Ruffed grouse	318,41
Prairie chicken	140.09
Rails	2,77
Jacksnipe	70.54
Mallard	210.23
Black duck	20.72
Green winged teal	76.88
Blue winged teal	66.23
Pintail	26.08
Coot	371.57
	15.99
Widgeon	57.86
anvasback	
Red head	20,59
Greater bluebill	124,21
esser bluebill	77,19
ny other duck	18,43
Canada goose	2,72
Slue goose	22
now goose	1.02
my other goose	80
Voodcock	4.40
il other small game	85.85
Soheat	26
led fox	2.28
ray fox	7.70
laccoon	14.78
lack squirrel	4.114
possum	11,725
obwhite quail	10,171
heasant	154.915
Iungarian partridge	18.310
'otal estimated kill of all species.	5,672,308

## TRAPPING STATISTICS

Animal	1931-1932 Season Pelts Taken	1982-1983 Season Pelts Taken
Muskrat	288,500 11,536	41,548 6,607
RaccoonSkunk	1,979 28,624	1,318 18,591
WeaselFox	20,558 801	18,005 441
WolfBadger	414 208	361 180
Otter Opossum Wild cat	170 292 50	98 \$19 \$6
Total	298,122	82,504

# WINTER FEEDING CONTEST WINNERS 1932-1933

Rat- ing	County	Organization	Address	No. of points	Prize
1	Douglas	Fish & Game Lea-			
2	Rusk	gue Fish & Game Ass'n	Superior Ladysmith	1,878 699	250 Mutant pheasants 150 Mutant pheasants
3	Barron	Izaak Walton Lea-	Ladysmith .	055	100 Mucant pheasants
-		gue	Cumberland	540	100 Mutant pheasants
4	Outagamie .	Fish & Game Ass'n.	Appleton	522	50 Hungarian partridge
5	St. Croix	Sportsmen's Clubs.	Hammond	425	60 Mongolian pheasant
				i i	or 75 Mallard ducks
6	Dunn	Menomonie Audu-			TO MANAGE GUCKS
-		bon Society	Menomonie	270	50 Mongolian pheasant
			,		or
7	Calumet	Sportsmen's Club	Brillion	258	60 Mallard ducks 40 Mongolian pheasant
•	Catamet	Sportamen s Citib	Бишоп	200	or
				1	50 Mallard ducks
8	Eau Claire	Rod and Gun Club	Fall Creek	221	50 Ring-neck pheasant
9	Sheboygan _	Spring Farm Rear-	a		50 Dt
10	Dodge	ing Club Rod and Gun Club	Sheboygan Lowell	187 184	50 Ring-neck pheasant 50 Ring-neck pheasant
ii	Sawver	Rod and Gun Club	Havward	171	80 Ring-neck pheasant
12	Manitowoc	Fish & Game Ass'n	Manitowoc	164	30 Ring-neck pheasant
13	Racine	Root River Camp-			or average and an parameter
	l	ers Ass'n	Racine	140	30 Ring-neck pheasant
14	Eau Claire	Rod and Gun Club	Eau Claire	136	80 Ring-neck pheasant
15 16	Polk Bayfield	Rod and Gun Club Conservation Club	Frederic Grandview	127 128	80 Ring-neck pheasant 25 Ring-neck pheasant
17	Racine	Junior Izaak Wal-	Grandview	120	25 reing-neck pheasant
		ton League	Racine	122	25 Ring-neck pheasant
18	Portage	Izaak Walton Lea-			
	١	gue	Stevens Pt.	96	25 Ring-neck pheasant
19 20	Price	Conservation Club	Park Falls	91	25 Ring-neck pheasant
20	Jenerson	gue	Lake Mills	90	25 Ring-neck pheasant
21	Monroe	Rod and Gun Club	Sparta	75	25 Ring-neck pheasant
22	Oneida	Game Bird Feeders	Rhinelander	70	25 Ring-neck pheasant
28	Dunn	Rod and Gun Club	Boyceville	70	25 Ring-neck pheasant
24	Bayfield	Conservation Club	Cable	69	25 Ring-neck pheasant
25	Lafayette	Rod and Gun Club	Shullsburg	68	25 Ring-neck pheasant

# WINTER FEEDING CONTEST WINNERS 1933-1934

Rat-	1			No. of	
ing	County	Organization	Address	points	Prize
		-		اـــــــــــــــــــــــــــــــــــــ	
		Landa	Organizations		
		_	organizationi	•	
1	Douglas	Douglas County		1 1	
		Fish and Game	Superior	1.870	150 Mongolian pheesants
2	Outagamie	Izaak Walton Lea-		1.,0,0	100 Monforms bronzens
_		gue and Outagami	e	1 ]	
		Fish & Game Protect, Ass'n.	Appleton	817	100 Mongolian pheasants
3	St. Croix	St. Croix Rod and	Appleton	911	100 Mongonan poemanus
•		Gun Club	Hudson	567	75 Mongolian pheasants
4	Calumet	Calumet County			
5	Manitowoc	Sportsmen's Člub Manitowoc County		506	60 Mongolian pheasants
b	Manitowoc	Fish and Game	ή		
		Ass'n	Manitowoc	489	50 Mongolian pheasants
6	Portage	Izaak Walton Lea-		0-0	0035
7	Rusk	gue	Stevens Pt.	850	80 Mongolian pheasants
•	Itusk	Game Ass'n	Ladysmith .	245	20 Mongolian pheasants
8	Sawyer	Winter School Con-	.  ·		
	1	servation Club	Winter	144	15 Mongolian pheasants
		Madin	0-414	_	
		Medium	Organization		
1	Barron	Rod and Gun Club		309	100 Mongolian pheasants
2	Sheboygan .	Spring Farm Rear- ing Club		287	75 Mongolian pheasants
8	Green Lake	Rod and Gun Club	Princeton	229	50 Mongolian phessants
4	Dodge	Rod and Gun Club		112	25 Mongolian pheasants
5	Sawyer	Draper School Con-	- D	99	15 Manualian mhaasanta
	'	servation Club	Draper	ן שש	15 Mongolian pheasants
		Small (	Ortanizations		
_					70.15
1 2	Polk	Rod and Gun Club River Hills Bird	Osceola	100	50 Mongolian pheasants
-	MINAUNCE .	Lovers Ass'n.	River Hills	92	20 Mongolian pheasants
2	Kenosha	South Side Winter			
8	Fond du Lac	Feeders	Kenosha	92	20 Mongolian pheasants
•	rond du Lac	gue	Brandon	67	15 Mongolian pheasants
4	Fond du Lac	Junior Conserva-		· · ·	• .
		tion Club	Ripon	55	15 Mongolian pheasants
			1		

# WILD LIFE AND GAME REFUGES, WATERFOWL REFUGES, AND SANCTUARIES, JUNE 30, 1934

Name	County	Acreage
Ashland County Game Refuge (deer)	Ashland	7,680
Copper Falls State Park	Ashland	520
ake Owen Wild Life Refuge	Bayfield	1,020
ittle Flower Camp Game Sanctuary	Brown	40
ittle Flower Camp Game Sanctuary Ducida Golf and Riding Club Wild Life Refuge	Brown	740
Aerrick State Park	Buffalo	24
ranton Legion Wild Life Refuge Iniversity Bay Wild Life Refuge oxhall Wild Life Refuge	Clark	640 402
Iniversity Bay Wild Life Refuge	Dane	402 285
farker Wild Life Refuge	Dane	498
ake Wingra Refuge	Dane	500
dendota State and Memorial riospital Game Reluze	Dane	538
ake Wingra Game Refuge (water area)	Dane	200
nte Refuge	Door	2,209
eninsula State Park	Door	8,400
otawatomi State Park	Door	1,100
rule Game Refuge	Douglas	1,500
'amarack Farm 'attison State Park	Douglas	4,000 660
Vilson Wild Life Refuge	Dunn and St. Croix	1,200
Jorence County Game Refuge (deer)	Florence	4.960
Torence County Game Refuge (deer)	Florence Fond du Lac Fond du Lac	4,960 2,240
foon Lake Game Refuge	Fond du Lac	1,010
Aoon Lake Game Refuge amp Byron Wild Life Refuge	Fond du Lac	790
forest County Game Refuge (deer)	Forest	1,800
lelson Dewey State Park Black Hawk Refuge	Grant	1,650
slack Hawk Refuge	Green Lake	47
ake Puckaway Game Refuge (water area)	Green Lake	500
Mascoutin Country Club Game Sanctuary	Green Lake	160 60
Fower Hill State Park	Iowa	10,280
ron County Game Refuge Broy Gun Club Refuge Krohn's Lake Wild Life Refuge	Juneau	2,450
Crohn's Lake Wild Life Refuge	Kewaunee	1,697
Jncle Joe's Wild Life Refuge	Kewaunee	1,468
Circt Conitol State Derk	Lafayette	2
afayette County Wild Life Refuge	Lafayette	970
Afayette County Wild Life Refuge Kraftwood Refuge	Langlade	283
Solumn Scate Came Meluke	Lincoln	15,860
Manitowoc County Fish and Game Protective	36	520
Association No. 1	Manitowoc	520
Association No. 2	Manitowoc	785
Manitowoc County Izaak Walton League Refuge No. 1	Manitowoc	640
Rib Mountain State Park	Marathon	160
zaak Walton Game Preserve	Marathon	920
Headquarter House	Marinette	1,400
Marinette County Game Refuge	Marinette	3,420
White Rapids Wild Life Refuge	Marinette	2,118
/alley Farm Refuge	Monroe	880
Archibald Wild Life Refuge	Oconto	8,420
Caldron Falls Wild Life Refuge	Oconto	640 680
Phron Lakes Came Defuge	Oneida	9 400
Three Lakes Game Refuge	Oneida	2,400 750
Aurie Lake Game Refuge Chousand Islands Game Refuge	Oneida	1,600
housand Islands Game Refuge	Outagamie	600
Telulah Park Game Refuge	Outagamie	40
Randall Fox Farm Sacctuary	Outagamie	52
Martha Boyd Game Sanctuary	Outagamie	40
Cllington Wild Life Refuge	Outagamie	1,600
aird Wild Lafe Refuge	Outagam.e	1,080
Shorecliff Wild Life Sanctuary	Ozaukee	40 580
Dientate Park	Polk Price	18,000
nterstate Park Sailor Lake Game Refuge Root River Wild Life Refuge	Racine	1,150
Overcrest Refuge	Rock	1.147
Devil's Lake State Park	Sauk	1,400
Potters Game Refuge	Sauk	308
Round Lake Game Refuge	Sawyer	490.
Ojibwa Wild Life Sanctuary	Sawyer	850
Sawyer County Game Refuge	Sawyer	8,440
Seneca Wild Life Refuge	Shawano	1,080
Kohler Game Refuge Terry Andrae State Park	Sheboygan	2,200
	Sheboygan	112

# WILD LIFE AND GAME REFUGES, WATERFOWL REFUGES, AND SANCTUARIES, JUNE 30, 1934—Continued

Name	County	Acreage
North Branch Game Refuge	Sheboygan	1,420
Forest Preserve Refuge	Sheboygan St. Croix	2,102
St. Croix Reserve No. 1		
Taylor County Game Refuge	Taylor	9,600
Perrot State Park	Trempealeau	950
Clear Crooked Lake Game Refuge	Vilas	3,800
Trout Lake Refuge	Vilas	23,000
St. Germain Wild Life Refuge	Vilag	640
Little Twin Lake Wild Life Refuge	Vilas	1,000
Constance Lake Reserve	Vilas	1,169
Forest Lake Wild Life Refuge	Vilas	1,160
Washington County Wild Life Refuge	Washington	1,440
Camp Minikani Wild Life Refuge	Washington	187
Cushing Memorial State Park	Waukesha	8
Pabst Farms Wild Life Sanctuary	Waukesha	50
Red Brae Farms	Waukesha	504
Northern Hospital Game Refuge	Winnebago	650
Springvale Wild Life Refuge	Waupaca	1.080
Winchester Wild Life Refuge	Winnebago	800
Lake Biron Wild Life Refuge	Wood	1.650
Tri-City Wild Life Refuge	Wood	8,500
Total		183.110.6

# Part II—Section 9 LAW ENFORCEMENT INDIVIDUAL WARDEN RECORDS July 1, 1932 to June 30, 1933

Warden	District	Cases	Won	Lost	Fines	Jail Sentences (days)	Costs	Seizures	Fees
Regular Conservation Wardens									
Adamski, John	Sparta	18	17	4	\$200.00	780	\$39.79	17	\$ 20.31
Alderman, E. L.	Fortage	200	2.2	2 4	36	2,100	200.10	226	40.50
Apel, Harold	Menomonie	38	\$2	9	20.00	222	36.26	12	16.55
Baie, Arthur	Marinette	69	57	12	00.009	450	215.50	79	71.00
Bosworth, E. F.	Merrill	25	225	01	365.00	1,125	92.30	18	88 89 89 89 89 89 89 89 89 89 89 89 89 8
Chase, Arthur	Oshkosh	28	38	210	125.00	710	68.06	19	1.50
Cole, W. A.	Wisconsin Rapids	\$	8	8	275.00	299	129.36	81	29.92
Curtis, P. S.	Viroqua	- 9	0	01,	100.00	န္တ	20.02	ω (	
Disdrick Deter	Webster	35	30 6	- 0		210	15 00	2.6	A 20
Dockham, F. A.	Baraboo	22	- t-	14.	50.00	180	83.59	3 4	27.95
Dunham, Albert	Oshkosh	8	16	*	100.00	480	32.71	90	
Edick, James	Sheboygan	18	12	တ	20.00		118.15	56	25.62
Egan, John	Manitowoc	4.5	₹8		100.00	40	12.85	12	6.50
Elliott, W. F.	Whitewater	25	3:		860	089	96 10	11	82.88 82.88
Fess, Ed.	Oconto	: E	18	9 00	250.00	220	36.90	600	28.25
Fognot, J. B.	Tomahawk	ន	11	,	340.00	496	70.06	22	16.75
Giesen, Louis	Fountain City.	01	<b>60</b>	61	20.00	စ္တ	16.91	••	3.25
Gray, Robert	Milton	97	97		220.00	1,020	61.20	201	26.85
Hanson, Allen	Ladvsmith	-8	98	10	770.00	420	108 08	99	54.20
Hayner, S. W.	Eagle River	\$	38	20	200.00	240	99.17	99	63.82
Hope, Lawrence	Hammond	12	<b>∞</b>	41	150.00	8	82.07	<b>90</b> (	27.06
Hornberg, Frank	Stevens Point	<b>Z</b> :	918	101	205.00	120	126.40	30 <del>c</del>	16.80
Hoggord, Harry	Torotte	140	86	01	20.02	200	20.00	100	96.16
Jakoubek, K. C.	Phillips	19	12	010	20.00	008	5.10	82	9.65
Jeske, Louis	Appleton	7	7			6		67	
Johnson, George	Kichiand Center	722	17	- 29	210.00	390	19.74	92	16.70

INDIVIDUAL WARDEN RECORDS—Continued July 1, 1932 to June 30, 1933

Warden	District	Савев	Won	Lost	Fines	Jail Sentences (days)	Coats	Seizures	Fees
Regular Conservation Wardens—Con-Johnas, J. W. Jonas, J. W. Jonas, J. W. Jonas, J. W. Jonas, J. D. Kramer, Emil Lake, R. J. Lange, Ellmer Leng, Frank Long, John McNeaghen, J. W. Mixon, Fred Mixon, Fred Mixon, Fred Moeller, Ira J. Nixon, R. A. Nixon, R. A. Nixon, R. A. Nixon, R. A. Nixon, R. A. Nixon, R. A. Nixon, M. J. Peterson, P. C. Peterson, P. C. Peterson, A. J. Peterson, A. J. Peterson, A. J. Peterson, A. J. Peterson, A. J. Rasch, Val. Rasch, Val. Rasch, Val. Rasch, Val. Rasch, William Red, Clifford Resch, Val. Rasch, William Red, Clifford Sanpson, Andrew Scolman, A. J. Scolman, J. G. Scolman, J. G. Scolman, J. G. Scolman, J. G. Scolman, J. G. Scolman, J. G. Staffbauer, F. A. Trafner, Dan	Whitehall Spooner Aabland Fearlimore Aabland La Crosse Lus Crosse Lus Crosse Lus Crosse Lus Crosse Luster Relinelander Superer Kewaumee Florence Florence Florence Florence Florence Florence Rectock Spooner Bayfact Milwaukee Milwaukee Milwaukee Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Rectock Re	200214850 88888 488 482 41382 6 7 5 2 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	20118708118888118988888888888888888888888	1 9FF8 F Hot-186490 994-1884901 p-1	28.28.28.28.28.28.28.28.28.28.28.28.28.2	880 880 880 880 880 880 880 880	88 88 88 88 88 88 88 88 88 88 88 88 88	84 28 6 2 8 6 2 7 4 4 6 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	25. 12. 12. 12. 12. 12. 12. 12. 12. 12. 12

Rangers and Special Wardens*  derson, Carl J.  Industrial Devoy  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  Into River  I			_				
Brule Frentce Prentce Philips Medford Amberg Merrika Merrika Rice Lake Ladyamith Eadyamith Porse River		_					
Prentice Philips Modford Amberg Merritan Rice Ladyamith Eadyamith Page River	<b>6</b> 4	90 00	20.00	91	8 48	•	1.25
Phillips Medford Amberg Merrilian Merrilian Merrilian Merrilian Teres Ladyamith Eagle River	7	9	80.00	28	20.16		12.16
Ambers Ambers Merrillan Rec Jake Ladysmith Ladysmith Eagle River	<b>-</b>	4		<b>6</b>		21	
Amber. Mertilan Rice Lake Ladysmith Eagle River	0	7		9	9.00		8.8
Merritan Rice Lake Ladysmith Eagle River	14	87°	8.9	2008	68.75	<b>30</b> (	14.25
Rice Lake Ladysmith Eagle River Townshamit	4		82.00		17.08	90	3.5
Eagle River	8	<b>80</b>	- 20.00	8	12.60	-	8.8
Eagle River	9	9	20.00	120	4.68	<b>1</b> 0	1.30
Tomeheart	ıc	- 7	190.00		88.14	*	15.29
	œ	·oc	2	150	4 46	•	45
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Trout Lake	* ;		:	021		9;	
Iron River	으 유	10	100.00	160	21.26	8	11.50
Rhinelander	7	_ «		S	4 25	_	- 00
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Wabeno	7	10 - 61	190.00	100	61.85	2	69.88
Haveerd	o:	-	200	e e	8	4	4.30
			-	88	3	' ;	
Shawano	-	0	30.091	3	38.35 30.35	27	3
Phillips	61	19	150.00		89.15	9	47.25
Понтор	0	0	5		200	-	5
TIP WELL	•	40	8.2		2	- •	8.5
Kninelander	~ ~	- 7	1 1 1 1 1 1 1 1 1	08	4.25	•	3.7
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Ashland	90	7	100.00		12.00	_	
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Tradysmitth	0	9	3.20	2	18.01		3.3
Wehater	00	00	200		19 10	œ	97.6
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wilbocdus	0			3	90.00	0	20.10
Three Lakes	~	- 22			7 25	•	90.7
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Simogning	•	4	_	GT	8.0		1.40
Townsend	×	20	20.00	200	8.50		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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White Lanke	71		:	3	9.00	7	3
Oshicosh	-	_	2000	Ş	2	01	6.82
	•			3			
Florence	•			3	68.8	10	RO.
Quamit Take	•					٥	
Outming Take	•			3		•	
Arrests made by other special wardens							
	96	96	00 000		10 67	5	98 70
	9	7	200.002	210	19:10	3	3
			Ļ				
61	2.066	1,741 825	\$19.788.30	27.448	\$5.410.30	2.210	\$2,881.19

* Officers making three or more arrests.

# INDIVIDUAL WARDEN RECORDS July 1, 1933 to June 30, 1934

Warden	District	Cases	Won	Lost	Fines	Jail Sentences (days)	Costs	Seizures	Fees
Pomiles Consessed Worldon									
Adamski, J. F.	Sparta	8	56	တ	\$325.00	810	\$62.53	46	\$20.50
Alderman, E. L.	Portage	•	œ			9	24.10	9	8.8
Apel, Edw.	Eau Claire	83	22	-	10.00	6	74.41	19	37.56
Apel, H. B.	Menomonie	6	<b>6</b> 0	-	20.00	8	16.85	92	9.40
Baie, Arthur.	Marinette	88	13	7	100.00	180	203.96	26	69.20
Bosworth, E. F.	Merrill.	6	00	_	271.00	150	61.70	20	14.55
Button, Percy	Richland Center	11	17		250.00	160	20.54	8	20.85
Chase, A. C.	Oshkosh	22	17	4	100.00	180	47.79	20	8.90
Cole, W. A.	Wisconsin Rapids	23	18	₹	200.00	346	111.92	72	25.40
Daliman, Royce	Argonne	16	16	:	20.00	180	83.44	œ	14.95
Devine, Barney	Webster	œ	•		226.00	150	15.69	8	18.10
Diedrich, Peter	Milwaukee	7	တ	-	220.00	<b>8</b>	82.90	15	42.29
Dockham, F. A.	Baraboo	20	16	4	125.00		65.06	==	21.75
Dunham, Albert	Oshkosh	18	91	63	300.00	84	36.28	22	3.45
Edick, James	Sheboygan	19	16	4	200.00	300	187.88	19	80.19
Egan, John	Manitowoc	4	4		150.00	8	2.58	æ	
Elliott, W. P.	Whitewater	19	28	တ	615.00	8	627.72	97	238.60
Fees, Ed.	Madison	31	2	-	20.00	980	26.85	22	26.80
Fisher, F. W.	Oconto	41	98	20	300.00	150	78.87	40	94.92
Foundt, J. B.	Tomahawk	ıo	10		100.00	8	14.40	61	1.70
Glesen, Louis	Fountain City.	17	16	_	250.00	210	22.94	2	2.00
Gray, R. A.	Milton	22	82	67	260.00	420	453.90	ន	255.10
Hall, A. W.	Darlington	67	-	_			8.90	8	2.66
Hanson, Allen	Ladysmith	8	8	67		160	90.60	8	22.80
Hayner, S. W.	Eagle River	65	82	-		480	160.20	84	67.45
Hope, Lawrence	Hammond	91	10	190		8	11.86	61	7.20
Hornberg, Frank	Stevens Point.	12	-	•			51.68	2	3.60
Hosford, Harry	Medford	3	31	1		1,080	48.10	08	18.20
Hougen, H. O.	Loretta.	16	12	₹		450		67	33.75
Jakoubek, K. C.	Phillips	2	2			270	6.80	13	12.57
Jenke, Louis	Appleton	12	2	64			46.80	•	18.05
Johnson, George	Portage	8	32	00		388	183.50	7	78.88
Johnson, T. J.	Whitehall	8	200	<b>90</b> (	180.00	345	90.24	77	30.78
Jones, J. W.	Minocqua	81	2	7		242	86.89	16	68.70
Jones, L. D.	Ashland	95	2,	N		200	16.86	<u>ec</u>	10.80
Areker, John	alongue	- >	77	•		420	20.00		10.40

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Keney, R. A. Kramer, Emil Lake, R. J. Lange, Elner Lawrence, C. H. Lee, Albert	Frank John ague, Harley ughton, James	Fred Sr. Ira J. R. A. Cy. Louis	Octoburn, Maries Peterson, A. J. Peterson, P. C. Powell, A. W.	tandall, F. D. theaume, I. C. tobinson, A. J. towe, Halle	Schwalbe, O. J. Scolman, Jas. T. Seymour, Louis Swith, Ira A. Stiglbauer, F. A. Swift, Erneet,	Tiedeman, H. C. Tourtillot, Ralph Trainer, Dan. Waakow, Benj. Worden, J. D.	Rangers and special wardens* Anderson, Carl J. Armbruster, Dewey Bergutat, H. J. Borkenhagen, John Brackett, L. G. Galhoun, Roy Churchill, Jas. Cranrer, H. T. Cranrer, H. T.

# INDIVIDUAL WARDEN RECORDS—Continued July 1, 1933 to June 30, 1934

Dahl, H. R. Devenux, Jas. Devenux, Jas. Diamond, Earl Diamond, Earl Coodreh, Owen Hanson, J. E. Hanson, J. E. Hanson, J. E. Hayward, Lloyd Hilliker, Pern Hilliker, Pern Hilliker, Pern Hogue, Robert Kuirkpatrick, Alvin Kuirkpatrick, Alvin Shawano Lawry, R. O. Washburn Marinette Miller, Candon Shawano Lawry, R. O. Washburn Miller, C. B. Spooner Spooner Spooner	ri rer Palle	44440890540888800588	044440004MF84M98994	N	868518818888888888888888888888888888888	100 100 100 186 90 100 100 60 60 60 60 60 80 80 80 80 80 80 80 80 80 80 80 80 80	18 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117 5 117	4 0 40 6	1.80.001 1.70.0977.94 8:1.45
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Woodard, D. C.		, , ,	-	04	10.00		86.55	-	10.80
_		•	'	1					
Arrests made by other special wardens									
(less than 8 arrests)		82	4	7	185.00	088	118.78	- 9	80.25
Total		Ļ		İ	100				
		1,967	1,672	296	\$17,779.50	24,214	\$6,908.08	1,674	\$2,416.41
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# **SEIZURES 1932-1933**

Article	Number Seized	Number Sold	Proceeds From Sale	Other Disposition
Automobiles				
Chevrolet	1			Held
Nash sedan	ī	1	\$70.00	
Chevrolet coupe	1 1 1 1	1	190.00	Held
Model T roadster Chevrolet coach 1980	1			Held
Chevrolet coach 1980	1	1	122.50 25.00	
Hudson truck Dodge sedan	1 1	1 1	25.00	
Hupmobile	i	1	17.00	Held
Ford roadster	i			Returned
Chevrolet	ī			Held
Chevrolet coach Ford cabriolet	1	1	87.50	
Ford cabriolet	1	1	92.50	
Chevrolet touring	1	<b>-</b>		To Trout Lake state
G. M. C. truck 1928	1			nursery Held
Chevrolet truck	i			To state forestry
Cheviolet at acaiiiii	•			division
Chevrolet sedan	1			Returned
Chevrolet sedan	1	1	25.00	
Dodge coach	1		<b></b>	Returned
Buick coupe Marmon coupe	1 1 1 1			Returned
Marmon coupe Lincoln sedan	1	1	250.00	
International truck	1	i	35.00	Returned
International truck	•	•	35.00	
Deer				
Carcasses	878	828	\$8,046.64	14 donated
		1		28 destroyed 8 held
Venison	2,281 lbs.	1,781 lbs.	284.26	126 lbs. donated
		-,		324 lbs. destroyed
Canned venison	9 cans 79		l	Destroyed
Hides Heads	2	78 2	42.05 6.00	6 held
Tails	50	50	12.50	
Live	21	ľi	15.00	18 to game farm
		l .	i	8 destroyed
			1	1 released 3 donated
Fish		ì	1	o donated
Commercial	9,266 lbs.	9,166 lbs.	615.71	75 lbs. destroyed
Game	865 lbs.	842 lbs.	84.10	25 lbs. donated 13 lbs. destroyed
	682 fish	484	320.51	10 lbs. donated 62 fish released
	002 11811	404	320.31	74 fish donated
		1	Ì	112 fish destroyed
				,
Rough	47 fish	25 fish	2.25	22 donated
Fishing Foundament		ł	1	
Fishing Equipment Nets	101	28	57.50	47 destroyed
14000	101		1 31.30	26 held
Reels	76	İ		47 destroyed 26 held 76 held
Rods and reels	4	1	2.00	3 held
Seines	21			11 destroyed
				9 held
Set lines	258	1	.25	1 returned 248 destroyed
Det Imos	200	•	.25	9 held
Spears	28	6	1.25	12 held
-		1	1	10 destroyed
Traps	29			28 destroyed
Missellanassa"(in -13		1		1 held
Miscellaneous (includ- ing poles, creeks, ice	1	1		i
chisels, hooks, etc.)_	103	77	6.85	24 held
cuiseis, noors, ecc.) _	1 200	, , ,		1 returned

### SEIZURES 1932-1933-Continued

Article	Number Seized	Number Sold	Proceeds From Sale	Other Disposition
		i .	ł	i
Fur Animals Beaver	67	59	452.49	1 destroyed 7 held
Ferret	5	2	.10	3 destroyed
Fox	_1	51	20.00	
Mink Muskrat	51 654	645	127.81 209.89	9 held
Rabbita	5	1	.50	4 donated
Raccoon	38	17	42.75	18 donated 6 released
			1	1 held
Skunk	0.5		45.90	1 to fur farm 12 released
Skunk	95	81	40.90	2 donated
Squirrel	3	1	.04	2 to game farm
Weasel	66	66	28.81	
Game Animals				
Bear		İ		
Carcasses	8	. 7	92.58	1 destroyed
Hides Live	5 11			5 held 5 to game farm
MVE	**			6 to zoos
Game Birds				
Upland	150	119	44.25	15 released
			l	10 destroyed 4 to game farm
			1	2 donated
Waterfowl	15	8	2.05	5 destroyed
				2 held
Guns Pistols	2	1	5.00	1 returned
Rifles	226	204	2,096.53	17 returned
				5 held
Shotguns	161	150	1.181.80	3 held 8 returned
Miscellaneous				
Boats	11	1	5.00	10 held
Boat motors	4			4 held
Christmas trees Decoys	28 27	27	6.75	28 donated
Dogs	10	8	98.00	1 donated
		1	l	1 stolen
Eagles	2	1	1.00	1 to 200
Ice boat Mounted birds	1 21	1	25.00	21 held
Traps	269	190	24.74	21 destroyed
Barrels, lanterns,				58 held
lights, pails, sacks,	19	. 4	2.00	1 returned
ew	19	1 *	2.00	1 destroyed
		l	1	18 held
Total proceeds			\$ 14,868.86	

(Expenses incident to seizure subtracted from gross proceeds.)

# **SEIZURES 1933-1934**

Article	Number Seized	Number Sold	Proceeds From Sale	Other Disposition
Automobiles	ı	İ		
Ford sedan	1	1	\$75.00	
Essex coach	1	1	40.00	- <u></u>
Dodge sedan 1931 Model T Ford Graham-Paige sedan	1 1 1	<b></b>		Held
Model T Ford	1			Held
Model T Ford truck	1	ii	8.00	Returned
Chrysler sedan 1925	i	l i	80.00	
Willys roadster 1931	î	ī	156.00	
Deer		•		
Carcasses	178	141	1,276.68	26 destroyed 6 donated
Venison	1,617 lbs.	1,054 lbs.	160.04	6 donated 93 lbs. destroyed
Heads	22	17	11.50	8 destroyed
*** .		۱		2 held
Hides	11 31	10	6.00 87.50	1 destroyed
Live	31	°	81.00	24 to game farm 1 to refuge
Fish				3 to 200
Commercial	15,134 lbs. 1,385 lbs.	15,184 lbs. 1,867 lbs.	1,287.89 168.02	18 lbs. destroyed
Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and Camera and	497 fish	192 fish	75.95	5 lbs. donated 10 returned
	401 11911	102 1180	10.50	277 destroyed
200	2,200	1		18 donated
Minnows Rough fish	288 lbs.	238 lbs.	13.23	2200 destroyed
Fishing Equipment				
Nets	87	18	251.50	29 held
11600	0.	10	201.00	40 destroyed
Rods and reels	17	11	47.50	5 held
		i		1 returned
Reels	185			185 held
Seines	11			5 held
		i		8 destroyed 1 returned
				2 to fisheries div.
Set lines	478	İ		448 destroyed
DC I IIIICO				25 held
Snag lines	58			58 held
Spears	58			82 held
				26 destroyed
Fish traps	13			7 destroyed 6 held
Gaff hooks, ice chisels, snag poles	12			8 held
auag polea			·	2 destroyed
				2 returned
Fur Animals Beaver	187	6	37.50	127 held
Deavers	101		31.00	2 released
		i	i	1 destroyed
		1	ľ	1 to Minnesota Con
		1		servation Dept.
Ferrets	2	1	1.00	1 held
Fox	-4	2	1 82.50	2 held
Mink	74	65	241.09	8 held
Muskrat	1,898	1,708	1./308.05	1 destroyed 148 returned
MA WORLD	1,050	1,108	1,000.05	34 held
		1	1	34 neid 3 destroyed
Opoesum	1	1	.40	o destroyed
Otter	Î Î	8	42.00	1 held
Rabbits	3		<b></b>	3 donated
Raccoon	60	22	72.00	9 to game farm
			l	4 released
		I	l	21 donated
		ı	i	4 skins held

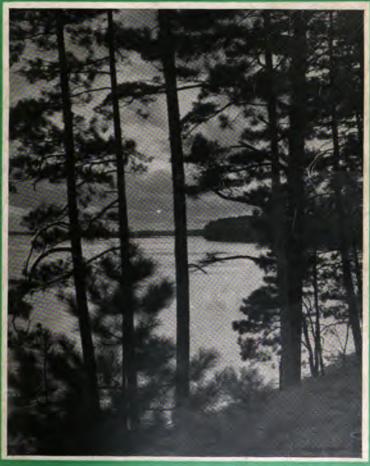
# Recrology

**W**illiam Korn April 1933 Fish Culturist 3. S. Curtis May 1933 Conservation Marben C. L. Alderman July 1933 Conserbation Marben John Guenther July 1933 Fish Culturist January 1934 John Fosnot Conserbation Marden Albert Lee July 1934 Conserbation Marden J. C. Bewitt August 1934 Fish Hatchery Superintendent

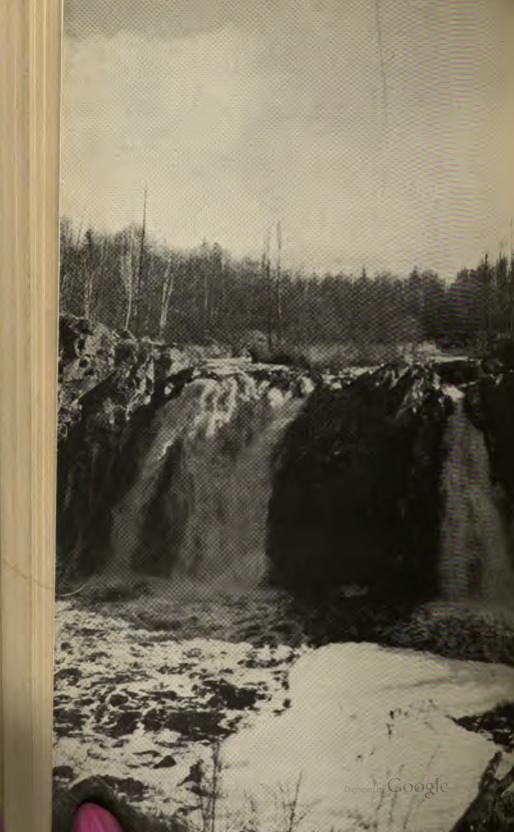
# Biennial Report of the WISCONSIN

STATE CONSERVATION COMMISSION





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# TABLE OF CONTENTS

	Page
Letter of Transmittal	3
Organization	5
Foreword—The Biennium in Review	7
Administration	11
State Forests and Reforestation	
Statistics	
Cooperative Forestry	21
Statistics	
Forest Protection	
Statistics	157
State Parks	43
Statistics	
Fisheries	51
Statistics	
Rough Fishing Operations	73
Game	
Statistics	
Law Enforcement	97
Statistics	
Recreational Publicity	
Public Relations	
Finance	117
Statistics	140
Stenographic and Clerical	119
Works Progress Administration	
Wisconsin Emergency Conservation Work	
Statistics	
National Park Service	
Resettlement Administration	135
In Memoriam	200

# LETTER OF TRANSMITTAL

HONORABLE PHILIP F. LA FOLLETTE, Governor of Wisconsin, Madison, Wisconsin.

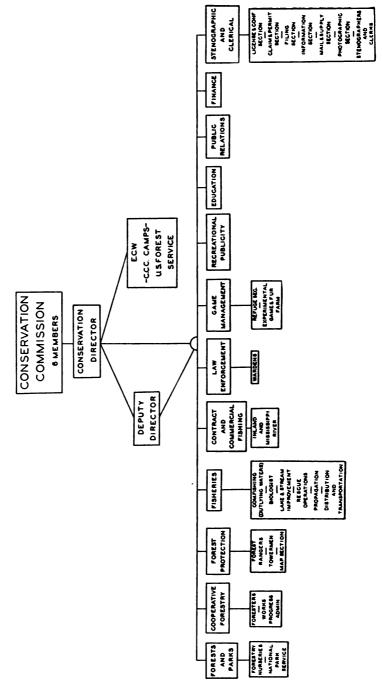
Sir: In compliance with the provisions of section 14.61 of the state statutes, we submit, for your consideration, the report of the State Conservation Commission of Wisconsin, concerning its work for the biennial period ending June 30, 1936, as well as certain recommendations, which we trust will meet with your approval.

Respectfully submitted,

# STATE CONSERVATION COMMISSION,

R. B. GOODMAN, Chairman,
LOUIS M. HOBBINS, Secretary,
JAMES A. CORCORAN,
T. J. KOERNER,
RALPH M. IMMELL,
NELSON LECLAIR.

WISCONSIN CONSERVATION COMMISSION ORGANIZATION GHART



# STATE CONSERVATION COMMISSION

## **COMMISSIONERS**

R. B. GOODMAN, Chairman, Marinette RALPH M. IMMELL, Madison T. J. KOERNER, Manitowish Louis M. Hobbins, Secretary, Madison James A. Corcoran, Webster Nelson LeClair, Two Rivers

## STATE CONSERVATION DEPARTMENT

H. W. MACKENZIE

Director

### **DIVISION CHIEFS**

ERNEST F. SWIFT Deputy Director

J. H. H. ALEXANDER
Superintendent of Recreational
Publicity

C. A. BONTLY

Comptroller

BARNEY DEVINE

Chief Conservation Warden

ROBERT A. GRAY
Superintendent of Contract and
Commercial Fishing

WM. F. GRIMMER
Superintendent of Game
Management

C. L. HARRINGTON

Superintendent of Forests

and Parks

EDWARD N. HEIN

Acting Superintendent of

Public Relations

LYDIA STUMPF
Chief Clerk

E. J. VANDERWALL
Chief Forest Ranger

B. O. WEBSTER
Superintendent of Fisheries

F. G. WILSON
Superintendent of Co-operative
Forestry



State park improvement work (upper left) Leveling roadbed at Nelson Dewey State Park (upper right) New Interstate Park road (bottom) Completing outlook point above Big Manitou Falls at Pattison State Park.

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## THE BIENNIUM IN REVIEW

Many creative and noteworthy achievements have been made in Wisconsin's conservation program during the past biennium, resulting from the manifold activities of the State Conservation Department coupled with exceptional cooperation from the federal government and the highly organized sportsmen's groups of the state.

The work of the department presents a highly integrated picture of activities relating to the full use and care of the rich natural resources of Wisconsin. This heavy routine has involved production and management of fish, game, and forests, and protection of the great outdoors in general, and while this report is necessarily brief and specific, the magnitude of the task cannot be judged by the thickness of the book.

A primary factor in the promotion of the state's natural resources was recently recognized by the state legislature, and under a special enactment the Conservation Commission was assigned the duty of recreational salesmanship. The now essential task of removing undesirable rough fish from our inland waters has also developed into a major state industry, employing a great number of men. This new work, as well as certain other new activities of the department, because they are innovations, became high lights and attracted unusual attention.

Conservationists generally have the same goal—although opinions vary greatly in the emphasis that is placed on some phases of the various problems.

Conservation interests can be classified in a general way into three groups:

- 1. Outdoor idealists with little interest in material products of the outdoors.
- Commercial groups with attention drawn to major industries based on state resources, such as wood products, commercial fish, and fur.
- Sportsmen who find the greatest appeal in the call of the outdoors for the pursuit of fish and game.

One of the great needs of conservation is a broad viewpoint and the realization that a sound program requires a single unified plan so that progress toward meeting all legitimate demands can be advanced as rapidly as facilities permit.

Wisconsin encourages citizens to cooperate in state rebuilding by assisting in those parts of the conservation program in which they are particularly interested. Practically every such activity has its by-products that also aid other groups in the conservation family. Bird feeding campaigns, refuges, marsh and cover restorations draw most interest from sportsmen but also mean much to those interested mainly from an esthetic point of view. Trout fishermen are showing an increasing interest in forestry as a means of restoring trout streams. The aim of a more beautiful outdoors held by the idealist has stepped to the front as a decided Wisconsin commercial asset.

Conservation is founded entirely on promotion of the general welfare, and a sound program cannot overlook commercial values such as wood use which employs 25 percent of our people, the commercial fishing industry, commercial fur production that stands in a position of national leadership, and the selling

of recreational advantages that add many millions to the total of state income and distribute it over the entire Wisconsin area of nearly thirty-six million acres.

Conservation is not, and cannot be, furthered by warfare between conflicting groups. A sound program means making the most of all state assets under a system of management where they will improve from year to year in spite of continued, intensive use.

Wisconsin has traveled a long road in conservation since fishermen won demands for their first fish hatchery, and the state found it advisable to employ a forester. The problem was viewed as comparatively simple then. It is extremely complicated now and promises to grow more so from year to year. Any single division of the Conservation Department now is faced with many times the problems than anyone realized might be encountered in the entire field of state restoration a half century ago.

Every branch of the department continues from month to month to find new fields and new problems that cannot be ignored. The success of any program is measured solely by results obtained, and full success comes only through recognizing and using every factor that may be revealed by practical field men or through scientific research.

Added to the natural increase of work coming to all divisions is the department's duty to cooperate as fully as possible with the thousands of citizens eager to help advance a variety of projects in their own localities. Availability of federal aid through a number of agencies has been a great boon to conservation in this state, but it also added greatly to the administrative load. Wisconsin wants the greatest possible return from every dollar spent on conservation, and this aim has involved extensive planning and supervision.

Hunting records show that Wisconsin continues to be a major producer of game. Our forests still furnish raw material to an important industry. Game fish production cannot be calculated as most fishermen are unlicensed, but the annual tonnage is enormous. Commercial fishing is a big industry that must be maintained on a basis to assure a perpetual supply. No state approaches Wisconsin's lead in the annual production of high quality fur. Recreation has also become firmly established as another ranking state industry.

The growth of Wisconsin from a pioneer state to its present development and its population of three million has meant an ever-increasing inroad on general outdoor values. Conservation has gone beyond the point of conserving, and the state faces the problem of meeting a demand that even virgin conditions of the area could not have supplied for a comparatively short time.

In general, the aim of the Conservation Department is to secure the highest possible production and yet maintain a balanced condition. This calls for the propagation of desirable species and control of destructive elements. Wisconsin is fortunate in the fact that its forest, fish, and game resources still have a high rate of natural reproduction. A well managed outdoors—whether it be farms, forests, or waters—produces the highest possible return without depletion of the seed stock.

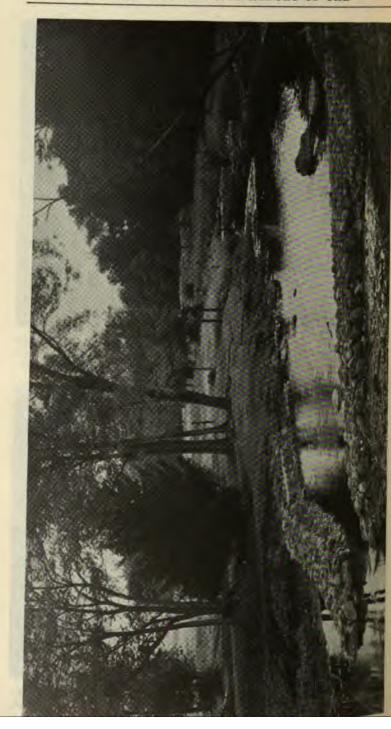
The following pages summarize the work carried on under the supervision of the Conservation Commission during the past biennium. It is our hope that this report will substantiate the expressed belief that the conservation dollar has brought a profitable return, and that conservation activities warrant a continued investment.



Dam built on site of old logging dam on the St. Croix River in Douglas County near Gordon. A new lake more than seven miles in length will take the place of one which disappeared when the old dam washed out.



Flowage area to be flooded by the St. Croix River dam. When the water rises to its full height, it will cover all of the cleared area shown in this picture. The darker, wooded areas will form 17 islands in the lake,



with those of fish wardens in 1891. In 1899 the esthetic tendency began to assert itself and an Interstate Park Commission was appointed and delegated to develop lands along the St. Croix River in conjunction with a similar Minnesota commission for use as a state park.

In these earlier days conservation, as we know it now, hardly existed. Some people concentrated on the need for preserving and planting fish; others believed game wardens should be appointed; and still others showed their principal interest to be in forestry. The idea of combining all forms of preservation and proper utilization of our natural resources apparently never occurred to them until 1915, when the various existing commissions and boards were merged into one Conservation Commission. This step did much toward unifying the aims and correlating the activities so that one phase was not overdeveloped while another was neglected.

The first commission, composed of three members and a secretary, was superseded by a single commissioner in 1923. The present form of commission with six unsalaried members was created in 1927. Commissioners are selected by the Governor with the advice and consent of the senate—three from the northern half of the state and three from the southern half. The term of office is six years with two members being appointed every odd year. Commissions appointed under this plan have served so successfully and adhered to such good policy that Wisconsin's program is receiving attention from all over the country, and many requests are received for information concerning the creation of such a body.

## DEPARTMENTAL DIVISIONS

A Conservation Director is employed to administer the policies and program adopted. It is his responsibility to direct the activities of each division of the department so that they may work toward the common end of promoting a durable, state-wide prosperity by proper utilization of our many natural resources. A Superintendent or Chief, responsible to the Director, is placed in charge of each of the divisions.

With the addition of the recreational publicity work during the biennium, the divisions grouped under the general heading of State Conservation Department now number twelve—administration, contract and commercial fishing (inland waters), cooperative forestry, finance, fisherias, forest protection, forests and parks, game, law enforcement, public relations, recreational publicity, and stenographic and clerical. Activities of each division are divided among sections and the various divisions cooperate with several outside agencies in their fields.

A division of education is to be inaugurated sometime in the very near future, which will be helpful in cooperating with schools, clubs, etc. in the teaching of conservation in its many varied branches.



New Oxygen Tank Car.

The above picture shows one of the Conservation Department's new oxygen tank cars in the state fish distribution service. The car is shown delivering part of a consignment of 30,000 white bass to Lake Koshkonong. The new equipment makes it possible to carry fish from one end of the state to the other and deliver them in good condition.



A class of Junior Forest Rangers examining a tract of Wisconsin virgin timber.

## STATE FORESTS AND REFORESTATION

## STATE FORESTS

During the present biennium the state forests and state forest lands have taken on a new significance because of their high value for public recreational uses. Ordinary discussion in connection with the improvement of the state forest lands of Wisconsin a number of years ago constantly emphasized the value of these lands for the growing of timber, and this is still a most important consideration. However, as the years have gone by, this phase of the development work has taken a place subordinate to that now carried on, which seeks to make these lands of growing usefulness in recreation, not only for the people of Wisconsin but for out-of-state visitors.

When one considers that the state is now the owner of more than three hundred miles of lake and river frontage in the Northern State Forest alone, one can realize what a valuable recreational asset is available. This value will increase in years to come as people have added leisure time and the means for travel. On these state owned forest lands are many desirable sites for public camping and picnic grounds, for group camping, for refuge and hunting areas, for forest trails and woodland roads, and for a wide variety of general recreational uses. The protection from fire which has been afforded these lands for many years has proven its worth in that the second growth is now of a size to afford shade and shelter, as well as to make the water frontage attractive because of the green bank of foliage. Many people prefer the second growth forest to the original virgin forest for recreational uses.

### STATE FOREST AREAS

The Conservation Department continues to administer the regular established state forests. The largest of these, located in Vilas county is the Northern State Forest, which contains approximately one hundred and forty thousand acres. Here the holdings of the state are well blocked for the most part and provide good operating advantages. The limits of this general area were enlarged during the past two years, but no new purchases of land were authorized.

The Brule River State Forest is located in the Brule valley of Douglas county, and contains 3,991 acres. It is primarily a cut over area now growing back to a new forest area of natural reproduction, but also containing some extensive forest plantations.

Located along the north fork of the Flambeau River in Sawyer county is a tract of 2,961 acres of virgin timber known as the Flambeau River State Forest. It has a frontage of about three and one-



Twenty-year old Norway Pine plantation at Northern State Forest.

half miles, and is best reached by canoe from the river itself. The area is jointly administered by the Conservation Department and the Commissioners of Public Lands, with the largest acreage under the jurisdiction of the Commissioners.

The American Legion State Forest of 28,856 acres is located in Oneida county and is of a type similar to the Northern State Forest, which is located just north of it. Many lakes and streams intersperse this area.

During the year 1936 the Conservation Department acquired nine hundred acres of land for state forest purposes in the kettle moraine region of southeastern Fond du Lac county. This area is known as the Kettle Moraine State Forest, but its development will be along recreational lines. It is the first attempt on the part of the state to establish a large forest park tributary to the thickly populated southeastern part of the state.

As set forth in the report of the previous biennium, state owned lands in Wisconsin are of two general classes—those under the jurisdiction of the Commissioners of Public Lands, and those under the jurisdiction of the Conservation Commission. The Commissioners of Public Lands act as a board of trustees for the administration of the so-called trust fund lands. The proceeds from the sale or management of these lands are added to the fund for the aid of the various schools of the state. The Conservation Commission has under its jurisdiction only those lands expressly and specifically set aside constate parks or state forest lands.

#### ACTIVITIES

Administration of state forests is largely concerned with the development and maintenance of state forest roads, the improvement and policing of public camp grounds, the protection of the state owned property from fire and trespass, the improvement of the growing tim-

ber stands, cultural practices undertaken for the betterment of the forest growth, details relating to the leasing of land, the exchange of lands, the care and protection of physical property such as buildings, and similar items which would naturally arise from the ownership and development of any forest property.

At the present time about twenty camping sites are established and maintained on the Northern State Forest alone. With the aid of the CCC camps a new dormitory to house fifty men was constructed at the forest headquarters on Trout Lake, also two new and enlarged buildings for garage, tool room, office and shop. Six new wells were drilled at established camping sites for the improvement of domestic water supplies, new sanitary facilities provided, new camp ground tables built, bathing beaches im-



Preparing seed beds at Trout Lake Nursery.

proved, and in general, all recreational equipment in the state forests was improved. A camp site patrol was maintained during the summer months for the policing of all camp sites, for the necessary cleaning up of the grounds, and for the painting, repairing, and conditioning of equipment which is constantly in use.

#### FOREST ROADS

In cooperation with the State Highway Commission the work of improving the forest roads on all state forests was advanced. The highway system on these areas is divided between the primary and secondary forest road system. It is the aim of the department to provide

a good black top surface for the entire mileage of the primary road system. These highways carry considerable traffic of all kinds, and the black top surface affords a dustless drive. The alignment, width and general construction standards of the primary forest road system are



Covering seed after seeding— Trout Lake Nursery.

adequate for a heavy and reasonably speedy traffic. The secondary forest roads will be of dirt surfaced with gravel, or top dressed, as occasion demands, and closed during certain times of the year when fire hazard or hunting conditions make it advisable. The entire system of forest highways now embraces about one hundred and fifty miles. Complete maintenance of these travel ways, including snow removal, is now the responsibility of the state with the State Highway and Conservation Departments cooperating.

## REFORESTATION

During the present biennium the tree growing facilities of the department
were materially expanded.
This work was done in direct cooperation with the
Emergency Conservation Work program
through the state forestry

camps. As the work of these camps in truck trail construction is completed (this was the principal activity during the first several working periods of the CCC camps), more attention is being given to straight reforestation of state and county lands. To furnish the trees needed for this enlarged planting program, additional nursery facilities were required. As a result, an expanded program of seeding was started in 1935 and 1936. This necessitated the purchase of additional land and a general amplification of all facilities, including buildings, water systems and other equipment. The facilities at the Wisconsin Rapids nursery were trebled, and a definite expansion was also provided at Trout Lake. A new nursery was established near Gordon in Douglas county, and limited facilities along this line were commenced at the McNaughton and Athelstane prison

camps. The output of the state nurseries in the biennium just ahead will be between forty and fifty million trees per year. It is planned to distribute and plant the bulk of these trees through the assistance of CCC camps. In the work of the enlarged nursery facilities, the CCC camps furnished by far the bulk of the labor and shared expenses with the Conservation Department.

#### TREE PLANTING PROGRAM

In 1932 the Conservation Commission adopted a program requiring the planting of trees on from eight to ten thousand acres per year. This aim was carried on during the biennium, with 9,188 acres of state and county lands planted in 1935, and 8,517 acres in 1936. It should be noted that the planting season of 1935 was favorable so far as weather conditions were concerned, and the general results in tree planting were considered satisfactory. The drought of the summer of 1936, however, was so severe as to result in extensive losses to tree growth all over the state. The highest temperatures on record were noted in 1936, and both volunteer as well as planted trees died by the millions all over the state. This loss was heavy in the state forest plantations not only of recent years, but in older plantations as well. Considerable work in replanting will be necessary in the years immediately ahead.

## FOREST TREE DISTRIBUTION

The principal outlets for forest trees from the state nurseries are as follows:

1. For reforestation of state and county forest land.

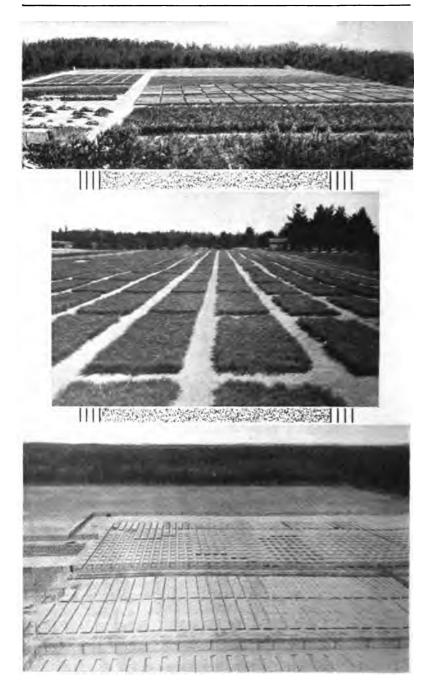
2. For planting by farmers and other landowners.

 For demonstration and educational purposes among schools and 4-H groups.

4. For highway planting and other planting by official public agencies.

During 1935 a total of 1,376,189 trees was distributed to farmers and other landowners, and a total of 3,254,220 trees was distributed during 1936. It is the plan of the department to continue to aid landowners in forest tree planting and in the promotion of better forest practices. The department has a close working agreement with the College of Agriculture (Extension Service) for the furtherance of this work, which includes the development of windbreaks and shelterbelts. The continuation of a special effort for the planting of windbreaks and shelterbelts in the central counties occurred in the present biennium. The severe drought of 1936 reemphasized the importance of this work and land investigations were carried forward to assemble the needed information and to prepare the necessary development maps. In each of the counties concerned a close cooperation between the county officials, the county agents and the state departments affected, was maintained.

The detailed records concerning forest planting and other pertinent statistical information for the biennium will be found on pages 146 to 154 of this report.



Little forest trees growing at the Trout Lake and Wisconsin Rapids State Nurseries.

# **COOPERATIVE FORESTRY**

## FOREST CROP LAW

The entry of lands under the provisions of chapter 77 of the Wisconsin statutes increased by 369,255 acres during the biennium. The acreage of privately owned lands actually decreased by 65,000 acres, despite the entry of 5,858 acres. This was due almost entirely to the expansion of national forests, which gave owners an opportunity to withdraw and sell the lands to the federal government. The same explanation applies to the large withdrawal of lands entered by Forest county.

Because of economic conditions, private enterprise has not been in a position to undertake business ventures in forestry, which is characterized by deferred returns. Although new entries were negligible, more planting was done in 1935 by industrial organizations in Wisconsin than in any other state. The forest crop law doubtlessly contributed to this record of private forestry on lands previously entered. Some of the decrease was due to the concellation of lands, which had been examined and found unproductive.

During the biennium 272,975 acres of privately owned lands were examined in addition to the examination of all lands prior to entry. It was necessary to prepare a complete set of land entry records, dating back to 1928. This was required as all duties of the state treasurer in connection with the forest crop law transferred by legislative action to the Conservation Commission. The records showing all previous payments were retained by the state treasurer, which necessitated a new set of ledgers to meet the requirements provided by statute. For effective administration certain amendments to chapter 77 are required, notably the change of calendar dates which cannot be complied with.

## **COUNTY FORESTS**

Twenty-five northern and central Wisconsin counties have now established county forests pursuant to section 59.98 of the Wisconsin statutes, an increase of three during the biennium. Our county forests now total more than one and one-half million acres. As in the preceding biennium, county forests have again increased at the rate of two hundred thousand acres annually. Six counties now have more than one hundred thousand acres each, Marinette leading with one hundred and seventy-four thousand acres.

These county forests represent a state and county partnership from which both will receive a return from the future crops of timber. In addition to development financed by the state contribution, much work



Second growth of hardwoods on an Oneida County forest,



Adjoining area after an improvement cutting.

has been done by WPA and CCC camps. Various types of work have been done, including 15,023 acres of forest plantation, and 19,738 acres of valuable second growth have received cultural treatment such as thinning or release cutting.

During the intervening years before there is any considerable return from forest products, the public will receive many direct benefits from these county forests. They provide 1,558,000 acres open to the people of the state for fishing and hunting, and constitute an attraction to people of other states, thus contributing to Wisconsin's rec-



Many counties have placed signs at the boundaries of their forests.

reational industry. Our game refuge system is largely based on these public lands. Camp and picnic grounds at scenic spots on lakes and streams are being improved for public use. Such inducements should aid materially in the reduction of forest fires, since they will assist in concentrating campers in areas which are patrolled.

## **COUNTY COOPERATION**

Cooperation by counties in declining to withdraw and sell lands in well-blocked areas of county forests has definitely improved. Invariably, such sales constitute favoritism to an individual and are definitely not in the interest of the local taxpayers. County zoning and forestry ordinances have helped. The Conservation Commission has also established the policy that county entries must be based on blocking of holdings and permanence of entries, and has enforced that policy by rejecting applications to enter additional lands where sales



Shelterbelt planting on sandy soil in Wood county, spring of 1925.



Same area—summer of 1936.

have indicated lack of adherence to good policy. Such rejections were based on the legal provision that the commission must find that the lands are actually held permanently for forestry before issuing an order of entry. Most of the county withdrawals were based on entry in error or desirable revisions of county forest boundaries.

In each county a committee of the county board has been designated to administer the county forests. In most counties this committee has appointed the county agent as administrative officer to cooperate with the department foresters, keep the records, and direct work projects.

Five state foresters assist the counties and coordinate the work of WPA and CCC camps on the county forests. During the past biennium annual regional meetings were held for county forestry committees and officers to inform them of the extent of their powers and duties. A forestry manual of 82 mimeographed pages, together with all forms used in the administration of the forest crop law and county forests, has been prepared and distributed. It will help to standardize administration, reduce unproductive correspondence, and advance the work.

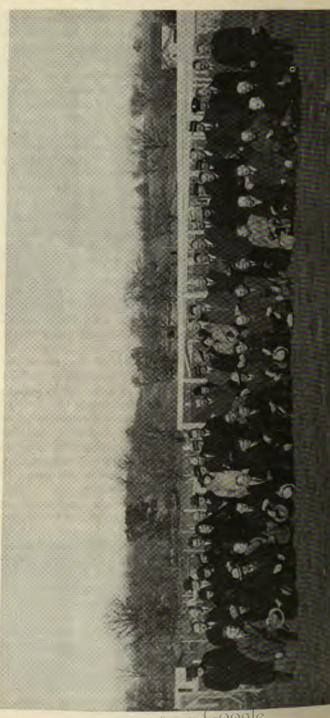
## LAND EXCHANGES

Land exchanges have been consummated with Marinette and Douglas counties, through which all Conservation Department lands have been blocked, and the counties have acquired the state lands located within their forests. Several counties, notably Marinette and Clark, have completed numerous other exchanges to block their forests. By one exchange Marinette county secured three miles of frontage on the Peshtigo River, including Strong Falls, the only remaining waterfalls on that famous stream. It is being developed as a recreation area.

This county has also made a few land purchases out of the forestry aid fund, where such acquisition was definitely in the public interest. The holdings of isolated settlers were purchased so they could move to better land and as a result, one school district with a total assessed valuation of only \$18,000 was eliminated. This means that the county and the state are relieved of all future school aids in this case. In addition, two settlers were relocated in Ashland county, three in Bayfield county, six in Langlade county, one in Lincoln county, two in Sawyer county, and one in Vilas county, making a total of twenty relocations in seven counties.

No one can ever say how much the state will save in road and school aids and fire fighting costs because county forests and county zoning have prevented settlers from locating on land remote from roads and schools. The expansions in state aids which have been prevented are indefinite but settler relocations bring actual reductions.

During the biennium, Chippewa, Florence, Jackson, Monroe, and Rusk counties have enacted rural zoning ordinances, bringing the total up to 23 counties and closing 5,200,000 acres to agricultural development and legal settlement. That these county zoning ordinances are not dead issues is shown by the fact that 13 counties have amended their ordinances. In each case this constituted revision of the zoning map for more logical boundaries or inclusion of additional towns.





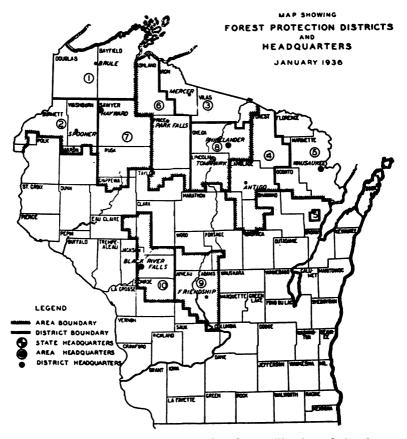


Two typical Forest Protection District Ranger Stations,
Forest Protection Headquarters at Tomahawk.

A forest protection film, showing actual fire fighting scenes, is now being prepared for educational use.

The press, radio, bulletins, pamphlets, signs, tags, programs, personal contact, and every other conceivable medium are used to bring the hazard before the public eye.

Until people are more careful with fire in the woodlands than they are in their own homes, there will be forest fires. Until forest owners



care for their property and, either by close utilization of the forest crop or by proper disposal, eliminate unnecessary debris from forests, fires will continue to be the beginning of possible calamities.

A successful fire prevention program is dependent upon a well organized and supervised field force provided with adequate equipment to meet all emergencies which may arise. Since the establishment of the forest protection headquarters at Tomahawk in the fall of 1934, considerable new equipment has been developed and built in the shop by the division engineer and distributed among the various districts for use in suppressing fires.

#### HAZARD REDUCTION

Another equally important factor in the fire prevention program is the reduction of hazards.

Slash constitutes the most serious hazard. Long strides to eliminate this menace were taken when the legislature passed a law prohibiting the accumulation of slash where it creates special risks along highways, railroad right-of-way, or near buildings.

When the department inaugurated a program to establish as authorized camp sites certain strategic places preferred by the forest-using public, a second hazard was reduced.

An enactment by the legislature making it unlawful for any person to set fire except for warming the person or cooking food within the limits of any forest protection district at any time of the year, except when the ground is snow-covered, without a permit, has been responsible for preventing many forest fires. With this law in effect, burning can be restricted in accordance with the seriousness of the hazard.

Periodic inspections of all locomotives belonging to railroad and logging companies which operate in the forest protection districts are made by the Conservation Department through its locomotive inspector. Defective engines are withheld from service until they are repaired.



Roadside cleanup work carried on by WPA crews in the town of Willard, Rusk county. Clearing away of brush, slash, and other highly inflammable material along roadsides does much to prevent fires from starting and gaining headway.

When the hazard is acute the railroad companies are required to place a patrol after each train going through the forest protection districts. This patrol is operated at the expense of the railroad companies.

In addition to actually preventing a number of fires these periodic inspections of locomotives tend to make the train crews more conscious of the fire hazard throughout the state.

During extremely hazardous periods, county and state patrolmen are employed to aid in the enforcement of the fire laws and solicit co-operation in preventing fires. They patrol all back roads, trout streams, lakes, camping grounds, and other places where people are likely to create a fire hazard. All cars in back countries are tagged with special red tags which explain the fire hazard and fire laws.

## DETECTION AND SUPPRESSION

Every effort is being made to detect all fires before they exceed onehalf an acre in size and to reduce the time between detection and the beginning of actual suppression activities to an elapsed time not exceeding one hour.

The 112 steel lookout towers, varying in height from 60 to 100 feet, are located from 10 to 15 miles apart throughout the forest protection districts, giving a complete surveillance of the entire area under forest protection during periods of normal visibility.

Towers are equipped with alidades and protractors for sighting fires and determining the bearing of the fire from the tower. The lookout men are the eyes of the fire control organization. It is necessary that we further develop a system of secondary lookouts to supplement the regular system during periods of low visibility and high hazard.

Two thousand miles of telephone lines connect the eyes of the organization with the various stations where equipment is held in readiness and crews can be assembled and dispatched quickly. There is a definite need for short range two-way communication radio sets to establish connections between dispatch stations and mobile units in the field.

The construction of truck trails into large tracts of wild land, formerly inaccessible, has provided a means for suppression crews to reach these areas in considerably less time than heretofore and thereby reduce the number of acres burned.

Suppression organization charts are prepared by the district personnel each year in advance of the fire season. These charts outline in detail where and what types of additional equipment may be obtained and lists men in the district who may be called upon to supervise fire fighting crews in emergencies.

In each district there are appointed annually in cooperation with the respective county boards a number of emergency fire wardens. They are competent men who are interested in conservation and are willing to drop their normal tasks and cooperate in fire suppression when called upon. They are paid only for such time as they are actively engaged in suppression work.

#### FIRE STATISTICS

The 1935 fire season was more favorable than that of any year since 1928. There were no prolonged periods of drouth although there were several short periods of acute hazard in the early spring. During the green season the fire danger was reduced to a minimum, while during the fall months a fire hazard potentially much enhanced by an exceptionally vigorous gowth of vegetation did not materialize to the extent expected, due to normal precipitation.



Trailer Pumping Unit Assembled at Headquarters.

During 1935 there were 561 fires which burned a total of 1,830 acres and caused damage amounting to \$619. Of the total number of fires, 202 were held to less than one-fourth of an acre; 320 burned from one-fourth to ten acres, and only 39 were larger than ten acres. In other words, 93 percent of all fires were held to ten acres or less.

The percentage of fires held to ten acres or less in past years is as follows: 1931, 32.5 percent; 1932, 66.7 percent; 1933, 72 percent; 1934, 81 percent.

In district seven, including all of Sawyer and Rusk counties and portions of Chippewa county, 100 percent of all the fires were held to ten acres or less, while in districts 3, 6 and 10, only one fire per district exceeded ten acres.

The season began with seven fires in March, reached the peak with 264 fires in May, reached a second high point in October with 72 fires, and ended with one fire in November. More than one-third of the

burned acreage was in district one, which includes a good deal of sand and jackpine slash country which is extremely fast burning.

The average fire for all ten districts burned three acres. Of the total 1,830 acres burned, only 800 acres were classified as forest lands, while 1,030 of the acres burned constituted non-forest lands.

Lightning caused only three fires, which is six-tenths of one per cent of the total fires in the state, again verifying the figures of past years that 99 percent of all fires are due to human carelessness. One hundred ninety-three fires, or 34 percent of the total, were caused by smokers, with land clearing a close second, causing 152 fires or 27 percent.

During this year 32 arrests for violations of the forest fire laws were made and 29 persons were convicted. In addition the costs of extinguishing 12 fires were collected from the parties responsible for such fires. Over thirty thousand permits were issued for the burning of debris during safe periods.

Favorable weather conditions, additional equipment, and more effective field personnel, together with the help of the CCC camps are credited with the reduction in direct fire fighting costs which were the lowest since the protection work has been organized in this state.

The year 1936 was an exceptional one in forest protection history. Conditions were more or less normal up to the month of June, when the rainfall for the month fell to only one-third of normal. July brought high, drying winds prevailing from the southwest and temperatures of well above 100 degrees for a period of almost a month's duration.

This severe heat wave coupled with low humidities and the high winds from the southwest completely dehydrated the country virtually making it a powder magazine.

During the period from March to June, inclusive, there was a total of 538 fires, burning approximately two thousand acres. The month of July brought 964 fires burning approximately 26,000 acres, followed by 527 fires in August, which burned approximately 68,000 acres; 43 in September, burning 250 acres; 75 in October, burning 250 acres; and 61 fires in November, which burned approximately 1500 acres. There was a total of 2208 fires, which burned 100,814 acres.

District one, comprised of Douglas and Bayfield counties, and district seven, comprised of Sawyer and Rusk counties, in the order mentioned, suffered the greatest losses through a combination of circumstances—namely, fires originating outside of the forest protection territory or in an adjoining state coming into protection territory on a large front; large unbroken sand belts, lying in the direction of the prevailing winds, which were covered by dense jackpine reproduction; inaccessible areas of hardwood and hemlock slash country; incendiarism; and a sharp variance from normal rainfall.

However, with this extreme fire hazard existing, in districts three, seven, and eight over 96 percent of the fires were held to ten acres or less.



The Watch Eye of the Forest.

More than two-thirds of the total area burned in the state was reported by district one. District six reported only 450 acres burned, this being the lowest of the ten forest protection districts.

The average fire for all ten districts burned 46 acres. Of the 100,-814 acres burned, 90,755 acres were reported as forest land, and the balance of 10,059 acres as non-forest land.

In the causes of fires, smokers were responsible for 38.2 percent—or 844 of the 2,208 fires. Railroads were next with 15.6 percent, or 343 fires. Clearing and miscellaneous caused 12.6 percent each, while lightning caused 5.7 percent, or 127 fires. Incendiarism was the cause of 8 percent, or 178 fires, this being the most inexcusable cause of all.

There were 116 arrests made for fire law violations, with 112 convictions. Twenty-three parties responsible paid suppression costs of fires.

The reports show that there was a total of 29,642 burning permits issued during the safe period of the season.

As previously pointed out, this severe fire period again brought home the fact that we are lacking in sufficient numbers of permanent personnel and heavy equipment to cope with extreme conditions.

#### SPECIAL REGULATIONS

With the fire situation becoming severe in early July of 1936, the Conservation Commission took immediate action in putting the emergency regulations again into effect.

Smoking was prohibited throughout the state forest protection districts except at specified places. The building of camp fires was restricted to authorized camp grounds or places of habitation, and no brush or debris burning could be carried on without special permit.

These stringent regulations were necessary under the existing hazard, not only throughout the territory under intensive protection, but in 92 townships within an additional 12 counties where serious fire hazard had developed.

#### EQUIPMENT

No additional trucks were purchased over the biennium although a regular policy of truck exchanges was worked out and will be carried on as long as funds permit. It is now recognized that the normal life span for trucks used in fire suppression work will average about three years. This will require an annual turn-over of approximately forty trucks, as it is essential that the trucks be absolutely dependable if we are to expect any degree of efficiency.

A standard hitch was adopted so that any truck in the forest protection division can pull any piece of trailing equipment.

Another crawler type tractor, of 25 drawbar horsepower, per district has been purchased so that each district now has three.

Twenty-two tilting platform trailers, designed by the forest protection engineer, were built up at the Tomahawk shops for transportation of tractors and plows.



Structural shop at the Forest Protection Headquarters, Tomahawk.

Further developments in plow construction were worked out with a Wisconsin manufacturer, and an order has been placed for an additional 22 units.

It has been demonstrated that centrifugal pumps have advantages over other types for fighting forest fires, and we have therefore adopted this type as standard equipment. Twenty of the larger pumping units have been built by the department, using four, six, and eight cylinder truck motors to drive centrifugal pumps from 300 to 600 gallons of water per minute capacity. These units are mounted on two-wheel trailers, using the standard hitch.

A survey conducted under the supervision of geologists has been carried on through the CCC camps over the past two seasons to determine the areas where wells can be jetted to provide water for fire fighting purposes. The value of this method has been clearly demonstrated, especially in "mop-up" work on many fires during the 1935–1936 season.

## **HEADQUARTERS AND REPAIR STATION**

In the brief period of its existence, the value of the forest protection headquarters has been clearly demonstrated. Material savings have been made through centralized purchases as we were able to take advantage of reduction in freight rates through carload shipments. With adequate storage facilities, larger quantities of materials were purchased and greater discounts received.

Reserve equipment is retained at the warehouse, and in emergencies is quickly dispatched to any point in the territory under forest fire protection.

Through the facilities offered in the shop we have been able to carry on the experimentation and development of special fire fighting equipment best adapted to our needs. Also, special equipment has been developed and built at much reduced cost in production.

Tractor, plow, and pump parts which are not readily available through other sources are stocked at the warehouse for immediate distribution to the field.

## CCC ACTIVITIES

The work of the CCC camps has greatly augmented the facilities for forest protection and fire fighting. During 1935 and 1936 the CCC camps constructed truck trails and fire breaks, erected miles of telephone lines, lookout towers, tower cabins, a certain number of garages, and removed fire hazard from many miles of roads, trails and forest land.

The man power made available through the CCC camps played a very important part in the reduction of suppression costs and in acres burned. If a permanent CCC program were adopted it would have a very material bearing on the forest protection program of the future.

#### EXPANDED PROGRAM

Experience has demonstrated that effective protection depends on more intensive supervision by competent men. The plans for the ensuing year list for the ten forest protection districts, each averaging 1,200,000 acres, the following personnel: 10 district forest rangers, 10 dispatchers, 50 junior forest rangers, 10 mechanics, 95 towermen for seven months, 25 towermen for nine months, 50 temporary laborers for seven months, and 100 patrolmen for five months.

The staff planned for the work year is required to maintain the organization, repair equipment and enforce the laws on timber trespass on state and county lands. The stealing of timber usually takes place during the winter months, and we have not as yet made an impression on the problem of slash disposal.

Although it is felt that the number of primary towers is reaching the point where we can expect satisfactory coverage during normal weather, there is a distinct need to replace some of the towers of light construction with those of more modern design, which are higher and are made of heavier steel.

There is a distinct need for developing a system of secondary towers, which would be manned during periods of low visibility and high hazard, to supplement the regular system.

As the program of protection was intensified, the ground telephone systems were found insufficient and inadequate. Larger numbers of call stations and increased detection facilities with longer lines made it necessary to convert all ground systems to metallic circuits and supplement iron wire with copper wherever the line became too long for efficient transmission.

Both ECW and WPA are contributing toward this program.

Although it is definitely felt that nothing yet designed can replace the telephone for point to point communication, there is a definite need for the use of radio for two-way communication between the mobile units in the field and the dispatching agent. It is our plan to equip each fire fighting crew with a portable radio set so that the district station will be in constant touch with the progress being made on each fire.

Additional men or equipment could be dispatched in cases of necessity or a crew bringing the fire under control could be sent direct to new fires springing up, thus saving valuable time and needless travel.

While the tower system is most efficient during periods of normal hazard, there are times, due to smoke and haze, that the visibility is reduced to a point where the towers are practically useless. It is proposed to supplement the tower detection system by the use of airplanes equipped with the same short wave radio sets so that fire information could be transmitted to the nearest forest ranger.

The airplanes will also prove invaluable in reconnaissance work and the direction of suppression activities on the larger fires.

Through the help of ECW and WPA, an airport and mooring docks for seaplanes are being provided at Tomahawk in connection with the forest protection headquarters, as well as at other strategic points.

The drafting section of the Conservation Department has been added to the forest protection division for which special offices are being provided at the headquarters as well as additional space for field supervisors of other divisions of the department.

The United States Geological survey conducted a triangulation survey by using lookout towers as observation points. This information has been made available to the Conservation Department, and has provided a precise horizontal control for forest protection district maps. Surveys are now being made so that the relative positions of township corners and other landmarks will be definitely located with reference to the triangulation monuments and lookout towers. As a result, more accurate maps are being drafted so that errors in the location of fires will be reduced to a minimum.

Maps for three districts have already been completed on this new modified polyconic projection, and over the next biennium new maps will be completed for all districts.

A testing laboratory is being installed in the shop to provide means for determining relative merits and efficiency of pumps. These tests will also indicate whether the pumps should be overhauled or whether they have been satisfactorily repaired.

A standard color scheme for all conservation buildings and signs has been adopted, and the sign section at the Tomahawk work shop is now engaged in repairing and repainting not only the signs of the forest protection division but those of other divisions as well.



Loading tractor and plow on tilting platform trailer.



Tractor and plow on trailer.

Much equipment of all types is still necessary to bring the needs up to minimum requirements, after which time sufficient funds must be provided for annual maintenance and replacement. The items needed are too numerous to list except perhaps a few of the main units such as trail builders, tractors, plows, trailers, trucks, water tanks, and pumps.

It is planned that during the next year 11 tilting bed trailers of approximately 12-ton capacity, equipped with power brakes, will be built at the Tomahawk headquarters.

### ASSISTANCE TO LOCAL COMMUNITIES

During the period of most extreme fire hazard, when the forest protection division was carrying a staggering burden, the Conservation Department was besieged with requests from town chairmen, mayors, village presidents, and city and village fire chiefs for assistance or equipment to suppress running marsh and woods fires. Such requests for aid in well-settled districts not under forest protection invariably came during periods of high hazard. To comply with these requests would result in the complete breakdown of the forest protection division within the territory for which it is directly responsible.

It is admitted that the state should give assistance to local communities, and the department realizes the conservation values jeopardized by such fires. So that the legislature may have information needed to establish such supplementary protection, several alternate plans have been drafted and will be included in the department budget request for the next biennium.



A few typical State Parks scenes.

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# STATE PARKS

Wisconsin is well located and possesses the requisite advantages of climate and scenery, good roads, and living accommodations to be the natural playground for millions of people. Thousands of forest fringed lakes and trout streams, the scenic and historic north and east shores washed by Lakes Superior and Michigan, the bluffs of the Mississippi on the west, unexcelled hunting and fishing, gorges and waterfalls, an autumn forest coloring unequalled anywhere, and a cool invigorating summer climate are some of the attractions offered the tourist.

Today Wisconsin is classed among the leading states of the Union in the possession of a system of state parks—areas of especial historic, scenic or naturalistic interest set aside and cared for by the state for the enjoyment of hundreds of thousands of annual visitors.

The primary purpose of state parks is to preserve the unusual and unique scenic or historic places of the state for all time, in a manner consistent with the legitimate use of such areas by the public. It is therefore imperative that the use of these parks adhere to prescribed regulations which seek to preserve the qualities that make them valuable as recreation centers. Each visitor to a state park or other such area is expected to do all he can to protect its natural features.

State parks answer a very definite purpose in the complicated life of modern America. They provide playgrounds and vacation lands for all of the people. The variety of life furnished by the quiet lake, the running stream, the depth of the forest, the study of wild things, the sight of unique rock formations, the inspiration of historic places and the natural impulse on the part of all of us for a touch of the life under the open sky will find fulfillment in Wisconsin.

#### DEFINITIONS

In order to present a more definite idea of the trend of thought concerning the areas known as state parks, they are divided for purposes of definition into three classifications as follows:

- 1. State Parks proper.
- 2. Roadside Parks or Waysides.
  3. State Historic and Memorial Parks.
- 1. The State Parks proper are relatively large scenic areas. Each has a distinctive feature of state-wide importance. Thus, Devils Lake State Park (1400 acres) is the outstanding bit of mountainous scenery in Wisconsin; Pattison State Park (1060 acres) contains the highest waterfall (165 feet) in the state; Rib Mountain State Park (280 acres) embraces the highest officially known geographic point in the state. Each state park is easily accessible over a good highway. The facilities for picnicking and camping and all other outdoor activi-



ties and the policing and regular management reach their best development on these areas.

2. The Roadside Parks are of lesser acreage and are intimately associated with the main, permanently located and paved highways and constitute places where the traveler can turn off the pavement and find a safe and attractive spot for a picnic lunch, for a rest, or for an overnight stop with tent or trailer. They are not recommended as



places for other than relatively short stops, but on them will be found adequate sanitary facilities, picnic tables, fireplaces and similar improvements, and good drinking water is provided.

3. The State Historic and Memorial Parks are strictly what their name indicates. They are relatively small in size but each possesses a distinctive and interesting historic story. They are not places for the enjoyment of the ordinary outdoor attractions nor are they suited to overnight stops, but they are all equipped for picnic purposes. They aim to preserve the inspirational events of early day Wisconsin, and a visit to them for such purposes is well worth while.





Facilities for picnicking, camping, and other outdoor activities, as well as opportunities for rest and relaxation, are provided at all Wisconsin State Parks.

#### PARK IMPROVEMENTS

The principal new activity during the biennium was the establishment in eight of the largest and oldest state parks of CCC camps for the development of these areas. The camps are operated jointly by the National Park Service, Department of the Interior, and the Con-



Hikers trail at Rib Mountain State Park.

servation Department. They are concerned with tasks which will improve the facilities used by the public in the state parks. More particularly their work involves the construction of buildings, the improvement and construction of roads, trails, parking spaces, the development of improved water and sanitary facilities, the construction of park tables, signs, drinking fountains and similar park equipment, the improvement of beaches and beach equipment, the landscaping of grounds, and many other recognized types of park work. There has, during the biennium, been a general study and reconsideration of state park objectives, plans of development. and rearrangement of the activities on each area, and it is definitely hoped that the improvements so far made will extend their usefulness to the public considerably. Without the aid of CCC camps and the labor

and materials furnished, it would have been impossible to provide these facilities with the funds made directly available to the department from state sources.

In several of the other parks WPA crews have been at work on general projects of a character similar to those undertaken by the CCC camps. This work has not been as extensive although it is of great value in enhancing the usefulness of these recreational areas.

## NEW AREAS AND LAND ACQUISITIONS

During the legislative session of 1935 authorization was received to acquire the farmstead of the first governor of the state of Wisconsin—Nelson Dewey—for park purposes. This area of approximately eight hundred acres is located about a mile north of the village of Cassville in Grant county. It is an historic as well as a scenic place and as the years go by will add very materially to the recrea-

tional opportunities of southwestern Wisconsin. The department contemplates a restoration of the buildings and furnishings of this early day plantation home. Work of this kind must necessarily proceed slowly, but it is expected that during 1937 the first definite use of this new park as a public, historic and recreational area will occur.

Important acquisitions were made at Pattison Park where four hundred acres of adjoining land were acquired. This unit, known as the Copper Creek addition, boasts a series of creeks with rocky gorge scenery. The entire area is covered with a second growth of forest of mixed conifers and hardwoods.

An addition of 560 acres was made at the Copper Falls State Park, adjoining the present state holdings to the north. It includes the large bend in the Bad



Outer Rim Trail from Summit Rock to Lake—Interstate Park.

River and a most prominent river valley, and is of rough scenic river topography.

#### ROADS

Practically all state park roads now have a black top, dustproof surface. The major portion of the construction work has been completed, and while it is not intended to carry out any further construction on the older areas, highway maintenance will, of course, have to be continued as occasion arises. All road improvements are made in cooperation with the State Highway Commission.



Camping grounds at Terry Andrae State Park.



North shore of Devil's Lake from the West Bluff.

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# **ATTENDANCE**

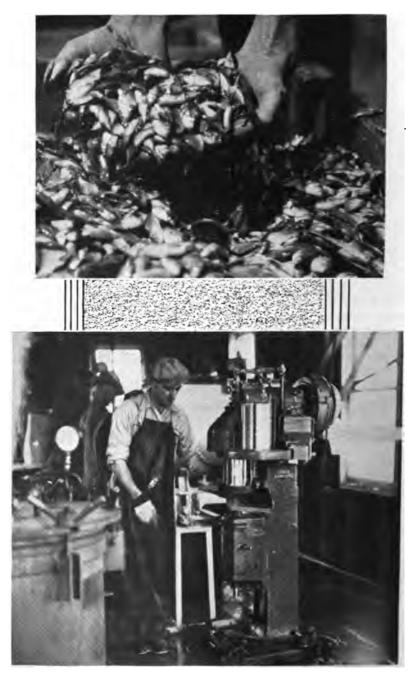
The seasons of 1935 and 1936 witnessed a large and generally increasing use of the state parks. During 1936 an actual count of cars and visitors was made on those parks where CCC labor was available. In round numbers about one and one-quarter million people visited the

state parks during each year of the present biennium. The tendency is for a general increase, Devils Lake still remaining in the lead with greatest attendance. A growing number of visitors in turn calls for increased facilities, and the aim of the department has been to try to keep abreast of the demands of the people for recreational opportunities and facilities. Encouragement has been given to hiking and nature study through an enlarged system of park trails. Attention has also been paid to the improvement of beaches and water frontage, to the policing of each area, to camp and picnic ground equipment and to general park operation and maintenance.



Trail to top of shaft at Tower Hill State Park.

Statistics on attendance and other pertinent information are found on pages 160 to 162 of this report.



Fish canning plant at the Madison Hatchery—(Top) Young carp for canning; (Bottom) Operating capping machine.

# **FISHERIES**

At an earlier date more attention was paid to fisheries work in Wisconsin than to any other phase of the conservation program. As early as 1874 the first fish commission was appointed and a small appropriation made, which was expended in the hatching of fish at a private hatchery in the village of Dousman. In the following year, 1875, the first state fish hatchery was built at Madison. It is because of a continually expanding program of fish propagation and planting over a period of more than fifty years that there is still good fishing in Wisconsin, even though the number of fishermen has increased greatly.

A constant searching for better methods in fish culture has resulted in several discoveries of outstanding importance in Wisconsin.

Prior to 1929, practically all efforts were expended on the production of fish. However, since that year a program has been carried out for the protection and development of habitat of various species of fish.

The present propagation policy is to stress the rearing of all fish which can be reared to a larger size before distribution, and adherence to this policy has not decreased the total production of fish in the various hatcheries. During the year 1936 more fish were hatched and distributed than ever before in a similar period in the entire history of the fisheries activities. It is a noteworthy fact that during the year 1936 Wisconsin had the largest hatch and distribution of muskellunge of any state in the union, the distribution totaling 6,998,870. Another policy now being practiced to the greatest possible extent is to hold as many trout as feasible in the hatcheries until the following year, when they have attained an adult size, before they are distributed to the various streams. All such distribution and planting of adult trout is made in the fall of the year after the close of the trout fishing season, so that they will have an opportunity to spawn once at least before being caught.

The Conservation Commission is continuing its cooperation with the Wisconsin Geological and Natural History Survey in the fish food studies being conducted in certain Wisconsin waters. The data gathered from these studies will no doubt be of material value in the future fisheries program.

The department also works in conjunction with and closely cooperates with the State Committee on Water Pollution, which is working out means for control and disposal of sewage and commercial waste so damaging to state streams and lakes.

For the past two years more strenuous efforts have been made toward the propagation of the flat or panfishes, such as blue gills, crappies, perch, etc., than heretofore, and it is with interest that we

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look forward to stepping-up considerably each year the propagation and distribution of these small fish.

Looking back over the years of fish distribution work, it is four that each year the fisheries program has been advancing with gree



Spring fishing at Oshkosh.

strides in all lines of activity which terminate in or great goal—that of propagating and distributing greater number of fish the various lakes are streams in our state.

# FISH DISTRIBUTION

During the year 1935 the new plan of fish distribution was adopted and followed in our fish planting program. It was accompanied by such a degree success that it was continued in 1936, and the dipartment anticipates carring on this revised planting program each year.

Under the old plan r quests for fish were file with the Madison office, at during the fish distribution period as many as possible were filled, depending upon the amount of fish available for this purpose during the year. When the fish were ready for distribution, the applicants we

notified of the time and place they should receive their consignment of fish. Our work was finished as soon as the fish were received since the individuals planted the fish in the waters in which the were interested.

The new plan of fish distribution necessitates the supervision of a fish plantings by Conservation Department employees, who make suthat all species of fish distributed are planted in public fishing water best adapted to them. This method of supervision eliminates the placing of fish in waters where they will not have a good chance thrive and of releasing state reared stock in private fishing waters.

The department endeavors to make an equitable allotment of available fish to all public waters adaptable to planting in each count when this is impossible, those waters which are omitted one year at the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the propert

for transporting fish. However, the work was carried on according to schedule, with practically no mortality.

The distribution program does not only include the allotment of fish reared in our hatcheries, but also embraces the transplantation of fish obtained in rescue operations, which are conducted in the Mississippi, Wolf, Fox, and Wisconsin Rivers. From these places thousands of fish that would otherwise perish are taken and distributed to other waters particularly adapted to the species of fish rescued.

The gigantic growth of the distribution program can be visualized when it is understood that during the year 1935 more fish were distributed in our state than in any other year since this work was started, the amount numbering 523,245,145 in comparison with a total of 80,290,255 fish during the year 1899. During the year 1936 an even greater distribution was accomplished, the total output surpassing that of 1935 by approximately forty million fish.

### SCIENTIFIC ACTIVITIES

The scientific activities of the fisheries division have been of a varied nature, but always pertinent to practical problems.

During the past biennium concentrated efforts were put forth in trying to solve heretofore unknown problems in fish culture, and a number of profitable and interesting advancements were made by these investigations. Particular attention was given to the propagation of muskellunge, and the knowledge gained from various investigations during the past two years should be of great future advantage.

During the past summer attempts were made to take the spawn adult bass, bluegill, and crappies, and hatch it under artificial conditions. Although these attempts were not entirely successful, the difficulties overcome during the last hatching season will be of great value in next year's work.

Extensive research work was conducted to learn more about the habits of different species of fish on their natural spawning grounds, and the kind of food desired during the various stages of their life.

No attempt will be made at this time to enumerate in detail every investigation in the last two years involving scientific activities. However, it should be remembered that such efforts—no matter how small they may be—are of major importance, as the knowledge gained from small investigations many times proves to be the key to bigger problems.

It is gratifying to know that Wisconsin is leading the field in overcoming many fish culture problems that have previously retarded the propagation program.

A greater expansion propagation program is being planned for next year, putting ino practical use all knowledge gained from the extensive research work conducted during the past two seasons. Investigations that have been started will be continued, and propagation difficulties will be studied until all problems now confronting fish culture work are satisfactorily solved.



Pike and Muskie Hatchery at Woodruff.

# PROPAGATION ACTIVITIES

The results of our trout and muskellunge propagation program have been mentioned elsewhere in this report.

The wall-eyed pike hatch has been exceptionally good during the past two years, more pike being hatched than during any similar period in the history of pike hatching. The total hatch was 895,200,-000 fish. There were certain periods when it was thought that the hatch would be greatly decreased, due to adverse weather conditions. However, these conditions were counteracted in time, so that no unusual loss in eggs was experienced.

The propagation and rearing program of bass, crappie, and bluegill was increased to a large extent during 1935 and 1936. More stress was placed on this phase of the conservation program than previously, and a greater distribution of these fish was the result.

To increase our supply of bass, crappies, and bluegills, new ponds were constructed during the last biennium, and by their use we hope to increase our future distribution of such species notably.

During the year 1936 attempts were made to hatch artificially crappie and bluegill eggs. Although this was a new venture, the results were indeed gratifying, as this year there were hatched at our hatcheries 8,134,787 crappie fry and 4,566,900 bluegill fry.

We have greatly advanced all lines of fish propagation activities during the past two years, and feel that greater advances are in store for us along these lines.

### MUSKELLUNGE PROPAGATION

The propagation of muskellunge is a question of vital importance to the Conservation Department. A few years ago very little was known about the artificial hatching of muskie eggs and the habits of the fish in its infant stage of life. Consequently, it was a per-



A prize 43 ½ pound Wisconsin muskie.

plexing problem to hatch great quantities of eggs, and no efforts were made to rear the young fry to a larger size before planting (all fry were planted immediately after being hatched).

During the past vears strenuous efforts have been put forth to obtain greater quantities of muskellunge eggs from the breeder fish on the spawning grounds and to know more about the habits of these fish in their first stages of life. Studies were conducted from the time the eggs were taken from the parent fish until the eggs hatched. The majority of the fry were then distributed immediately after hatching. However. quantities were held rearing ponds at the Woodruff hatchery for observation in an attempt to ascertain a successful method of raising the fry to a larger size without too great a mortality.

It is very gratifying to know that during the past two years more headway has been made in rearing the small muskie fry to a larger size than has heretofore been experienced, and we are looking forward to the time when all of the fry hatched may be held for some time before being distributed to waters adapted to them, providing the necessary funds can be obtained to carry on a project of this nature.

In 1936 more muskellunge were hatched and distributed in this state than in any other place in the country, and more satisfying still is the fact that more of the fry hatched were raised to a size of four to eight inches than at any previous time this work has been carried on by the department.

No stone has been left unturned in the investigations conducted in this most important work. Much knowledge has been gained relative to the intriguing problems of muskellunge propagation, and next year it is anticipated we will make valuable use of this knowledge in endeavoring to surpass greatly our output of this fine species.

The investigations of the natural spawning, hatching, and feeding of muskellunge that was instituted this year will be continued until the complete knowledge of all the activities in nature are definitely determined.

### MUSKELLUNGE PLANTING

The plantings of muskellunge made in our lakes the past two years are the results of hard and strenuous efforts put forth in the propagation program. The great risk of mortality involved in rearing the muskellunge and the large expense connected with such a program necessitates the utmost care in distributing these fish to areas known to be adapted to them. The waters which comprise the natural habitat for the muskellunge are located in the northern part of our state. However, each year during the past three years plantings of muskellunge have been made in Lakes Koshkonong, Mendota, Shawano, Pewaukee, and the Waupaca Chain of Lakes to determine the extent to which these fish will thrive and the possibilities of eventually enjoying the fishing for these fine fish in the southern and central parts of our state.

It is to be borne in mind that the fish were not placed in these lakes without first making a careful study of the conditions in each to be sure that the waters were to a large degree adapted to muskellunge planting.

Rumors have recently reached this office that muskellunge of 12 inches in length have been caught from some of the lakes where experimental plantings have been made, and if they are true, this program is materializing to our satisfaction.

With continual planting each year, we hope in time to have the muskellunge well established in these waters.

### TROUT PROPAGATION

The trout propagation program during the past biennium has, as usual, proven very successful in spite of the fact that one major catastrophe was experienced.

In the early spring of 1936 flood waters enveloped the Osceola fish hatchery, located in the northwestern part of the state, damaging buildings and grounds, flooding the rearing house and raceways, and consequently carrying thousands of trout of all sizes from their hatchery habitat. Many of the fish died in the rearing station on account of roily water conditions caused by the flood. To say the least, this setback in the Osceola propagation and rearing program was very disheartening. However, after the flood waters subsided it was found that a total loss of all fish, as first thought, was not experienced.

Many of the larger fish that escaped from the raceways with the flood waters were recaptured with nets from the waters where they congregated below the hatchery grounds. Work was immediately started after the flood to repair all damage done, and the propagation and rearing work is now being carried on at Osceola as usual.

The policy of rearing the small fry to fingerling size before distributing them to the many streams in the state is being continued with very good results. Each year many of the adult trout that have been retained at the hatchery for breeding purposes are released into the larger streams after the trout fishing season is over, and new breeders take their place in the hatchery. Very good success is now being experienced in holding a large number of fish at the hatchery until they are twenty months old. They are also released in the fall of the year after the regular trout fishing season is over, which gives them a chance to spawn at least once before being caught.

The trout propagation program conducted in our state is one of great importance, and efforts spent each year in this work and particularly during the past biennium have met with great success.

# COOPERATIVE REARING PROGRAM

During the past two years the cooperative rearing pond program has expanded in a marked degree. Many new ponds have been constructed by various sportsmen's organizations, and in some instances rearing tanks have been constructed.

Each year the department furnishes brook, brown, and rainbow trout of fingerling size to cooperators for rearing to a large fingerling size before being planted in the various streams. The sportsmen's organizations operate the rearing ponds, which they build in accordance with state suggestions at their own expense, during the rearing season which continues until after the close of the trout fishing season in the fall. In some instances the trout have been retained in the rearing ponds or tanks until they have attained a legal size before being transferred to other waters. The planting of trout from the ponds or tanks is done under the direct supervision of a Conservation Department employee, usually in the fall of the year. Many of these organizations maintain several ponds or tanks, and the number of fish distributed to each is determined by its capacity. During the past two years more than two million trout were allotted in this manner.

When an organization is desirous of obtaining trout for its ponds or tanks and notifies the department accordingly, an inspection of the pond is made by an employee of the Conservation Department to determine if it is suitably located and properly constructed. The inspector also determines the logical number of fish that can be properly cared for in that particular pond before any fish are received, so that best results may be assured.

The Conservation Department, after carrying on the rearing pond program for the last three or four years, has reached the conclusion that better results can usually be obtained by the use of rearing troughs rather than by rearing ponds. In the future the department will recommend the use of troughs made of galvanized iron which can be purchased through the department or built at a local hardware store. Each trough is 14 feet long, 14 inches deep, and 18 inches wide.

In constructing the troughs at the rearing station which may be selected, water can be introduced into the troughs at one end and because of their narrowness and depth, a greater current can be maintained for the fish to live in. In this way the troughs can be kept clean, the attendant will be better able to visualize the needs and condition of the fish and protection will be afforded from birds and animals.

In summing up the accomplishments of the cooperative fish rearing program, we find that it has proven very successful and beneficial, and it is anticipated this program will grow larger each year as more conservation clubs cooperate with the department in this work.

### FISH RESCUE OPERATIONS

One very interesting and important phase of the fisheries program, when conditions make it necessary, is the rescue operations conducted each year in the river bottoms of the Mississippi River. This work is done during the fall of the year, when receding water in the river leaves hundreds of land-locked pools and lakes throughout the bottoms. These bodies of water gradually dry up during summer and fall, and millions of fish would perish if it were not for the rescue work done by the Conservation Department. Some of the fish rescued are large, but the majority of them are of a small size and well adapted to planting in inland lakes and streams where they are given the opportunity to grow to a large size.

Parent fish go into the sloughs early in the spring to spawn when the water is high. They leave these spawning pools as the water recedes and return to the main channel of the river. At this time the small fish are not of a sufficient size to leave the pools before the waters become land-locked. Consequently, they are trapped in the numerous small pockets along the river bed.

Generally, the rescue crew consists of five men with nets, tubs, and other equipment necessary to extricate stranded fish. The crews travel up and down the river bottoms, seining out the fish that have been trapped in the land-locked sloughs, the largest percent of which are returned alive to the main channel of the river. Those not returned to the river are taken to the rescue headquarters at La Crosse. Here the fish are held in tanks until a sufficient number has been obtained to make up a carload consisting of two hundred cans.

The use of the regular state fish car "Badger" or a specially equipped railroad car with an air compressing unit for aerating the water in each can of fish makes it possible to transport the fish long distances without mortality. Many of the fish rescued are also transported by truck to various parts of the state, trucks with aerating systems being used on long hauls. The increasing demand for fish

rescued each year by this department makes the Mississippi River rescue operations of great importance.

Fish rescue work is also carried on, when conditions warrant, from the overflowed lands in the Fox and Wisconsin River valleys. Here the same procedure is followed in rescuing the fish as that employed in the Mississippi River bottoms. Extensive operations are carried on each year below the Fox River dam at Neenah. Thousands of white bass and perch are thus saved which would otherwise perish.

Fish rescue activities are employed in flowages above power dams on some of the northern rivers. When the water is lowered, fish sometimes become stranded around the edges of the flowage and would die if not released. On some of the smaller rivers, and in fact, any place in the state where receding water, lack of sufficient food, or other causes may result in the loss of fish, rescue operations are employed and an attempt made to save all fish possible. All such operations are conducted under the direct supervision of the Conservation Department.

The distribution work done at Phlox on the Wolf River—although it is not a rescue program—is one of major importance, for it supplies a source from which many panfish are obtained and transported to other state waters in need of restocking.

The rescue work carried on each year along the Wolf River in the vicinity of Gills Landing is also of worthy mention. Thousands of small bass and pickerel are taken from the receding waters in the marshes adjoining the main river and used to stock other state waters adapted to these species of fish.

During the past two years millions of fish have been rescued, which would have otherwise perished, and the accomplishments made along these lines are of outstanding importance.

### SPAWNING OPERATIONS

During the lake trout spawn fishing season in 1935, enough spawn was obtained to fill the three lake trout hatcheries located at Bayfield on Lake Superior, and Sheboygan and Sturgeon Bay on Lake Michigan.

Special permits were issued to 18 fishermen on Lake Superior and to 29 on Lake Michigan, authorizing them to catch lake trout during the closed season so that the department might obtain spawn for use in the hatcheries. The fishermen are allowed to keep and sell the fish caught as compensation for services rendered and use of equipment, since they are in effect employed by the state while conducting such operations.

The usual procedure was followed in the collection of spawn—a state representative being aboard each boat during spawning operations to see that the work was carried on according to state instruction. The fry hatched from the eggs taken are planted on the ree:s from which the parent fish are caught. Eggs collected must show 50 percent fertile in the hatchery to warrant issuing a permit to the fisherman the following year.



Stripping spawn from wall-eyed pike.

In addition to the Great Lakes spawn collecting operations, many trout were caught from Trout Lake in Vilas county and relieved of their spawn. The eggs were taken to the Woodruff fish hatchery for the incubation period. The fry thus hatched were planted back into Trout lake on the grounds where they would have hatched under natural hatching conditions.

During the year 1935 there were four permits issued to pound net fishermen in addition to all permits given to the gill net fishermen. However, the catching of trout for spawn collecting in the pound nets d'd not materialize as well as anticipated. The number of fish caught in all pound nets was 4,247 and weighed a total of 14,933 pounds—an average of 3.51 pounds per fish. The total number of eggs taken from all fish caught in the pound nets was 136 quarts, of which 121½ quarts eyed up at the hatchery.

A total of 5,528¼ quarts of eggs was taken from fish caught in both the gill and pound nets during the year 1935 to fill our three lake trout hatcheries.

The following table shows the total number of fish caught during the spawn fishing season,

No. fish caught from Lake Michigan No. lbs. fish caught from Lake Michigan (Average weight per fish 3.88 lbs.)	<b>99,456</b> 386,270
No. fish caught from Lake Superior No. lbs. fish caught from Lake Superior (Average weight per fish 5.35 lbs.)	10,112 54,119
Total no. fish caught	109,568 440,389

The 1936 spawn fishing operations have not taken place at this writing. However, we believe that a sufficient amount of spawn will be gathered this year to fill the three lake trout fish hatcheries to capacity. Permits will be issued and the spawn taking conducted in the same manner as last year.

# MISSISSIPPI RIVER FISHING

The cooperative law enacted by the states of Wisconsin and Minnesota, regarding the commercial hook and line fishing on border waters between these two states, has proven very successful. These cooperative laws extend the same fishing privileges on both sides of the river to people having either a Wisconsin or a Minnesota license.

Commercial fishermen operating in these waters are supplied with supervising wardens appointed by the state, and the same open and closed seasons for both states are applicable to these waters.

Average catches from these waters have been made by commercial fishermen during the past two years, and very good hook and line fishing has been enjoyed by many people in our state.

Cooperative regulations on these waters not only provide greater privileges to the fishermen, but also lead to less misunderstanding and more easily enforced regulations.

#### SMELT

Since the smelt made their appearance in the waters of Green Bay several years ago, they have reproduced very rapidly. Each spring just before the ice goes out, they migrate from the deeper water to the shores in search of streams for the purpose of spawning. Since the smelt is negatively phototaxic, or tends to shun the light, spawning activities take place during the night.

To the commercial fishermen and others, the spawning run of smelt merely means that there are thousands of tons of fish gathering along the shores and streams of the bay to be caught and sold.

Since the smelt have a very formidable set of teeth, they have been accused of feeding on the young of the more desirable commercial species. Examinations of stomachs of twenty-five hundred smelt revealed that this is not the case. The results of recent examinations of two different lots are as follows:

On April 22, 1936 examination of two hundred smelt caught in Lake Michigan near the reefs where lake trout had been planted a few days previously showed that they were feeding on small animals known as mysis and amphipods which inhabit the bottom of lakes. Only one smelt of this lot had fed on fish, and it had eaten another smelt.

The other group of smelt studied was taken in northern Green Bay on June 9, 1936. Of the 133 smelt in this group, only three had fed on fish, and in this instance the fish were small lawyers. The rest had fed on mysis and amphipods.

On the other hand, smelt have been found in the stomachs of lake trout, perch, and lawyers. The trout are very fond of the smelt. Some fishermen operating set hooks find this small fish very successful bait and are also enthusiastic about use of smelt on their set hooks. The smelt problem, however, has become a highly important one from commercial and detrimental viewpoints.

Smelt are highly prized by some of the commercial fishermen, and to others they are a nuisance. They become entangled in any sized mesh gill nets that are in use, snarling them up to the point that they will not fish, and making it almost impossible for the fishermen to clear their nets except by boiling them until the fish are soft enough to shake them out. In the spring of the year during the spawning period, they enter the shallow waters of the bay before going up the small streams where spawning takes place, and are caught in very large quantities with pound, fyke, drop, and even dip nets. The market price is very good for a short time, and fishermen realize a good profit. After the spawning activities have taken place, the smelt re-



Muskellunge spawning operation.

turn to the deep water, and it is here that they become a nuisance to the gill net fishermen during the summer and fall months.

Since the smelt is a very soft bodied fish, it is often impossible to ship them in a fresh condition. In a few instances it might be possible to ship a few, but the price is so low that no profit could be realized.

The economical and biological value of the smelt is growing and is recognized by many fishermen and conservation department officials. However, many problems regarding this species are still unsolved. The most important question is how to develop a method of capture that will enable fishermen to enjoy a longer season of fishing and to improve its market facilities.

In order to gather as much data as possible relative to this important smelt problem, extensive investigations were conducted during the past 1936 spring smelt runs and will be continued in future years.

# CLAMMING INDUSTRY

The clamming industry in Wisconsin began years ago when it was discovered that great quantities of fresh water mussels were to be found throughout the Mississippi River and its tributaries. A short time after this discovery, mussels were located in streams of the Great Lakes system. However, the Mississippi and its tributaries provided the principal supply and proved itself the greatest producer of fresh water mussels in the world.

The bulk of all mussels gathered is used in the manufacture of buttons, and the button industry flourished from 1900 to 1915. During those years it may be said to have been at its height, though at the present time it still is an important industry.

The decline it has suffered is due to two main causes—namely, the lack of raw material and the decline in the use of fresh water pearl buttons. Substitutes for pearl buttons have been made from wood, ivory, bone, horn, glass, fibre, etc., but none has proven as satisfactory for general use and beauty as those made from fresh water mussels.

Buttons alone do not comprise the value of fresh water mussels. A single pearl of quality sometimes found in fresh water mussels is worth thousands of dollars, while numerous pearls and slugs are valued from a few dollars to hundreds of dollars. Pearl material of irregular size and little or no iridescence is salable from \$6.00 to \$12.00 an ounce. The chance of finding a pearl of value provides the clammer with an incentive to work on at times when great quantities of mussels are not being taken, even though it requires favorable mussel grounds to yield one-half ounce of pearl material to the ton of mussel shells taken. The mussel shells provide well paid labor, and the possibilities of finding a valuable pearl makes "clamming" a profitable and interesting work.

The pearl button industry has turned millions of dollars into the state of Wisconsin, and hardly a town along the Mississippi River did not at one time have one or more pearl button blank factories in which were cut the button blanks from the mussel shell, the first step taken in the manufacture of pearl buttons.

In addition to the Mississippi River, great quantities of shells were taken from the Rock, Wisconsin, Wolf, St. Croix, and Baraboo Rivers by means of the crowfoot bar (most common method of taking mussels) and by hand picking.

With the decline in the mussel population, steps were taken to protect them from becoming extinct. This was done by closing certain mussel bearing waters to clamming and by specifying the kind and size of mussels that could be lawfully taken from open clamming waters. Regulations were also made relative to the manner in which the mussels could be lawfully gathered.

Although the clamming industry has declined greatly since its founding, it still furnishes a profitable source of revenue for many Wisconsin people.

# FISH REFUGES

Fish refuges are created to protect natural spawning and rearing grounds of game fish.

There are two kinds of fish refuges—those established in lakes and those in streams. The majority of lake refuges are established on known spawning grounds of lake fish, notably bass. Such refuges are necessary as bass usually spawn in June during the open season for other kinds of lake fish. Setting aside certain areas as refuges protects these late spawners from undue disturbance and results in a greater efficiency in natural reproduction. Such refuges are seasonal, extending until July 1 each year.

In some instances when a lake is fast becoming depleted of fish, the entire lake is closed for a period of two or more years. This gives the fish a chance to reproduce undisturbed, and with the aid of the state stocking program helps to increase the fish population.

The great majority of stream refuges are for the protection of trout in spawning grounds and places in which the infant fish stay until they are large enough to venture into the main streams. Refuges are generally located in the small feeder trout streams, and such refuges continue in effect throughout the year.

Another reason for the establishment of refuges in streams and rivers is to protect fish in places where they congregate and stay for long periods of time, making easy prey for either legal or illegal fishermen. Closing such areas does much to protect them in unusual gathering places, and refuge orders remain effective throughout the year.

At the present time there are 334 established fish refuge areas located in 56 counties of the state—Marinette county excepted. All streams and rivulets in Marinette county are closed to fishing with the exception of 49 designated areas that are open and closed as provided by law.

During the months of April, May, and June in the year 1936 there were 66 bass refuges effective in 18 counties of the state.

Previous to 1929 very little was done to protect fish in their natural habitat. However, during that year the value of this phase of the conservation program was recognized, and numerous water areas were designated fish refuges. Each year since 1929 the refuge program has been greatly expanding, and it is anticipated in the future that many more water areas will be set aside as the value of this program becomes more generally recognized throughout the state.



Many exciting hours can be spent in trout fishing in the forest depths of Wisconsin's ideal vacation land.

# FISH TAGGING

The purpose of tagging fish is to determine the extent of their migration and growth.

During the latter part of 1935 there were tagged and returned to the waters of Lake Michigan and Green Bay 844 lake trout. In the spring of 1936 a large number of black bass and muskellunge was captured from some of our northern lakes, tagged and released into the waters from which they were taken.

Numerous tags have been received by this department from lake trout that were tagged in 1935. All data has been recorded on each particular fish caught. To date no reports have been received relative to the bass and muskellunge that were tagged in the northern lakes.

Mr. Lester Smith, commercial fisherman at Port Washington, has cooperated with this department by submitting records of 300 lake

trout which were tagged and liberated at Port Washington in Lake Michigan waters. The first of these fish were tagged and liberated on June 20, 1929 and since that time many of them have been recaptured and statistics tabulated showing the range of migration and the increase in length and weight.

One remarkable record of interest shows that on June 13, 1930 a lake trout 14 inches long was captured, tagged, and released. This same trout was recaptured by DeWitt brothers of Oostburg on June 5, 1934 and measured 29 inches in length, an increase of 15 inches since tagging.

It is anticipated that this fish tagging work will be continued each year and valuable information will be gained in regard to the growth of fish and their range of migration in certain waters.

Any person catching a fish bearing a Wisconsin Conservation Department tag can cooperate with this department by sending the tag to the Madison office with information pertaining to the date the fish was caught, where it was caught, and its length and weight.

### FISH CANNING OPERATIONS

The amount of money expended in purchasing fish food during the last biennium to feed the growing and mature fish at the various fish hatcheries was approximately \$38,000.

To eliminate a large food expenditure in the future and at the same time make valuable use of undersized, unsalable carp, buffalo and other rough fish now being removed from inland waters of our state, a canning plant has been constructed at the Madison hatchery grounds where these fish are prepared and canned for fish food, thus reducing the cost of furnishing food supplies to our hatcheries.

At this experimental plant the rough fish obtained are killed, put through a meat grinder, placed in tin cans, thoroughly steamed under pressure to kill all bacteria, sealed in the cans, placed in retorts where they are thoroughly cooked, later cooled and stored until used.

The quantity of fish now canned is a minor enterprise as compared to the increased production that is planned after the canning operations become more systematically and intensively organized.

The output of fish food from the canning operations will not only decrease the cost of food for our fish but possibly turn this undesirable rough fish supply in our inland waters into a profitable commodity. It is believed that the canned carp, buffalo and other available rough fish will not only supply our hatcheries with food but will also be in demand by fur farms all over the country as valuable animal food.

# LAKE AND STREAM IMPROVEMENT

The method now being used to improve fishing conditions in our lakes and streams is a relatively new field of conservation activity.

Lake improvement work consists in endeavoring to "step up" the fish production per acre in the lakes. Units comprising 36 spawners



Interior view of fish canning plant—showing the operation of sealing caus before they are placed in retorts.



Filling retorts at state fish canning factory preparatory to a 2½-hour cooking process. Each retort holds 68 cans.

 $\mathsf{Digitized}\,\mathsf{by}\,Google$ 

and refuges are built and sunk every three hundred feet around the lake. One brush refuge about five feet high, six feet wide, and 15 feet long is clamped down in from eight to ten feet of water. This furnishes the fish with shelter and food such as insects, snails, etc. Five sapling tangles, 12 to 18 feet long, and three feet high, are then placed nearer shore with a three feet water clearance, to give the small game fish and minnows shelter and food. Five bass spawning boxes, 3x3', are filled with gravel and lowered into the lake to make natural spawning conditions for the bass. Twenty-five flat surface "spawning wheels" are placed in the lake to create places where certain types of minnows, such as the bluntnose and others, may spawn as they will under flat surfaces. By constant stocking with fish and with the aid of lake improvement work, any lake should show a marked increase in fishing qualities.

Stream improvement consists in building current deflectors of logs or boulders in the stream to create more trout holes per mile for the fishermen and to produce insect life for the trout to feed upon. Deflectors are staked in the rivers in such a manner that an immediate digging action is begun by the current. This sweeps the sand off the bed of the river and deposits it behind the deflectors. Gravel and rubble stones upon which the insects hatch and live now become exposed and daily food for the trout is available throughout the year.

Behind the deflectors a quiet area is created and this is "brushed" so that the newly hatched fry and the minnows will have a place of refuge from the larger fish that move into the newly dug holes and faster water.

Since this program was started by the state only a small percentage of our thousands of lakes and miles of trout streams have been affected by this work. However, it is planned to expand the improvement operations as speedily as possible, and this program should soon bring about a marked improvement in stream and lake fishing.

### **FUTURE PROGRAM**

The lakes and streams in Wisconsin with their bountiful supply of game fishes are surpassed by no other state in the Union. The lakes and streams of the state attract thousands of people each year. However, if the fish population in them is not maintained to a sufficient degree to warrant good catches, fishermen will naturally turn to other waters. This would mean hundreds of thousands of dollars lost to the state of Wisconsin annually from lack of tourist trade. Not only must we consider the future tourist dollar, but also the future generation who are dependent upon us to see that they, in their time, can go to the various waters and find that the fish population has been maintained for them.

In the past years the fisheries division has been very greatly handicapped in its activities by not having sufficient funds to carry on its fish propagation work to the fullest possible extent. This has made it necessary to limit the scope of the fisheries program to coincide with the money available.

Depending upon natural reproduction alone to keep the waters supplied with fish in this day and age would be futile. Nature, under ordinary circumstances, maintains an even balance of all things in its realm, but nature is being encroached upon by the vast hordes of fishermen sweeping down on its waters and taking out more fish annually than natural reproduction can supply. Consequently, without the aid of artificial propagation and the constant stocking of our waters with the state raised fish, it would be only a short time before good fishing would be something of the past. The solution to such a problem, without the aid of artificial propagation, would be to make regulations prohibiting fishing in the waters at all times, until such a time as the fish could reproduce sufficiently to restock the fishing waters so as to again warrant an open fishing season. We can visualize the drastic results to the state of Wisconsin if such circumstances were brought to bear upon us. It is, therefore, easy to see the importance of fish propagation and the great need of expanding this program to its fullest extent in order to cope with the additional thousands of fishermen coming into our state each year to spend weeks and months on our lakes and streams.

Some of the important activities involved in our proposed expansion program are as follows:

 Establish a laboratory, properly equipped, at the Madison hatchery grounds, for use in scientific investigations, in co-

operation with the University of Wisconsin.

2. Purchase a sufficient number of new oxygen tanks to greatly improve the facilities of our fish distribution; an added supply of fish cans; one thousand glass hatching jars; ten thousand new trout hatching trays; additional nets, boats, motors, and miscellaneous material to be used in connection with the gathering of fish spawn; and additional equipment to be used in fish rescue operations.

3. If possible, supply artesian wells at all trout hatcheries.

4. Construct additional muskellunge hatcheries as necessary in connection with the fisheries expansion program, and place them at advantageous locations so they will provide the greatest amount of production.

Build new propagation ponds for the increased production of bass, crappies, bluegills, trout, and possibly other larger

species.

6. Make all necessary repairs and improve grounds at the

hatcheries.

7. Expansion of the fish food production program at the newly established Madison hatchery canning plant so as to provide increased facilities to take care of the immediate canning of all carp, buffalo, and other rough fish available for this purpose.

In order to increase the activities and scope of the fisheries program, it is only natural that more money must be made available. If additional funds are provided, a greater fish production will be realized by making a material expansion in all lines of fish propagation activities. It will also be possible to carry on a greater fish rescue program and to establish many new rearing ponds throughout the state,

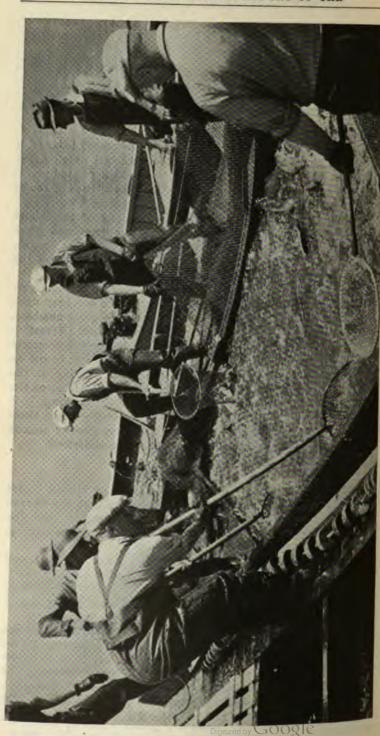


Wall-eyed pike hatching battery.

In this day of dense population and easy travel, good fishing cannot be considered just a gift of the gods. If Wisconsin is to have this popular sport, continued advance must be made in preserving and maintaining the fish population, and that inevitably means the production of more fish each year to meet this certain growing demand. With seven thousand lakes and ten thousand miles of trout streams constituting an unexcelled vacation region, fish propagation and other department activities along these lines must assure this generation, as well as future generations to come, that Wisconsin waters will always be stocked with a bountiful supply of fish.



Scenes of rough fishing operations—(Top) Returning game fish to water; (Center) Young carp fry averaging 3200 fry to the quart (Bottom) Lifting fyke nets in eel pout removal operation.





Running carp into the bag of the seine.

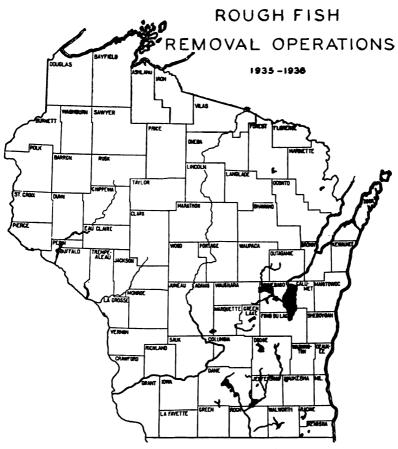
- Remove the small carp by the use of small seines, traps, and fyke nets during all times of the year when they can be taken.
- 3. In the lakes infested by carp, distribute northern pike, muskellunge, and white bass, which will use the small carp for food, and as a consequence pursue them for this purpose into areas of the lake that cannot be reached through netting operations.

# LONG-TIME PROGRAM

With these three systems it is the commission's belief that carp can eventually be eliminated to a great extent, if not absolutely exterminated. This procedure will be carefully carried on year after year, and in connection with it, studies will be made by such experts as can be secured to find other ways and means, if necessary, that will be helpful in the successful culmination of this program or a more expanded one.

There are different types of equipment used in conducting the removal of rough fish, principally carp. The greatest portion of them are removed by what is known as a drag seine. These nets range in length from a few hundred feet to ten thousand feet, with a depth of from four or five to fifty feet, depending upon the water area in which the operations are being conducted.

Hoop or trap nets are also used in various waters, but the operation of such nets is not satisfactory because, with the exception of the



# ACTIVITIES IN THE FOLLOWING COUNTIES

ACTIMITES IN THE FOLLOWING COUNTY

LAKE MASON
BROWN COUNTY
FOR RIVER
BUFFALO COUNTY
STURGEON BAY
RILEY'S BAY
FOR THEMPELEAU RIVER
COLUMBIA COUNTY
WISCONSIN RIVER
CALLWEIT COUNTY
LAKE WISCONSIN
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TREMPEALEAU COUNTY TREMPEALEAU RIVER WALWORTH COUNTY LAKE COMOS.
TURTLE CREEK
LAKE DELAVAN WALKESHA COUNTY LAKE LA BELLE WALPACA COUNTY WOLF RIVER WAUSHARA COUNTY LAKE POYGAN FOW RIVER FOX RIVER
WINNEBAGO COUNTY
LAKE WINNEBAGO
POYGAN LAKE
FOX RIVER
LITTLE AND BIG
BUTTE DES MORTS

spring of the year when the carp are migrating to their spawning grounds, they will not enter nets of this type in any great numbers. However, these nets are used to advantage in the removal of buffalo, suckers, redhorse, garfish, and eelpout.

It should be noted that in 1934 over six million pounds of rough fish, mostly carp, were removed from the inland waters of the state of Wisconsin, and that in 1935 over five million pounds were taken.

With the department entering into the field of rough fish removal with its own equipment and personnel, considerable time has been required to secure an organization with the proper equipment and technically trained personnel to carry on this work. Practically all the equipment needed must be made and arranged by experienced men, and the nets required to conduct these operations must be factory constructed especially for Conservation Department requirements. Practically every lake requires different depth of seine if it is properly fished, and in many instances, a different mesh.

Eight state fishing camps have been established and equipped by the department during 1935, but the necessary personnel to work with these different types of nets operated out of these camps is far below the requirements of the Conservation Commission at the present time. Personnel is being trained as rapidly as possible to carry on this work intelligently in future years. As practically every operation of a seine in a lake or stream causes considerable damage to the net from contacts with snags and other obstacles found in the water, experienced repairmen must be available at all times.



One lift of immature carp.



Relief distribution of carp and other rough fish by the State Conservation Department.

### REMOVAL OF SMALL CARP FRY

Since the Conservation Department has entered the rough fish removal program with its own equipment and crews, trapping operations have been inaugurated to remove carp when they are in the minnow stage. Up to the present time in 1936 over fifteen million of these small fry have been destroyed by means of traps, hoop nets, and fine mesh seines.

The present equipment and personnel available to the department are not sufficient to meet all public requests for this type of operation in every locality. Therefore, the Conservation Commission is providing this service in territories wherein it feels that an overabundance of carp or other rough fish is exceedingly detrimental, and will keep moving their operations from one territory to another where this work is most urgently needed.

Realizing that undesirable rough fish in Wisconsin must be controlled to insure the necessary perpetuation of game fish and aquatic vegetation, the commission is proceeding with the best known methods at hand, which are more thorough than those being used by any other state. It is the intention to continue and expand such line of procedure as rapidly and as far as equipment, personnel, and funds will allow.

It must be borne in mind that approximately sixty million pounds of carp have been removed from the inland waters of the state of Wis-



Carp corralled in holding pen.



A hundred thousand pound catch of carp.

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consin since 1912 and that there are thousands of pounds of these fish still in our lakes and streams. Evidently a serious situation still confronts the commission in its efforts to reduce to a minimum this undesirable fish population.

As carp do not spawn until they are in their third year, the removal of these fish during the early stages of their life should aid materially in keeping the number of adult carp reduced. This is now being done with good results, as the small carp are more easily captured and will lead into nets in greater quantities that the mature ones which are a very intelligent fish and more net-wise than any other species.

Carp are not the only undesirable fish inhabiting the inland waters of the state of Wisconsin. Urgent requests are received by the commission from citizens in various localities for the removal of other species. The taking of sheepshead from the waters of Lake Winnebago is a serious problem. On account of rough waters and the extremely rocky and uneven lake bottom, it has been impossible to remove rough fish except at certain times of the year and on days when the surface is comparatively calm.

# **NEW DISPOSAL PROGRAM**

During the spawning season for sheepshead, these fish have practically no commercial value, and their disposal has also been a difficult problem. Every possible effort, however, is being made by the commission to have them utilized for food.

Because of the fact that sheepshead are of some value at certain times of the year, the commission is conducting a new type of operation in the Winnebago area this fall, which it is hoped, will be successful. New devices have been constructed so that nets can be operated in much deeper water and several miles distant from shore where they congregate at times in considerable numbers after their spawning seasons.

A canning factory for the disposal of all unmarketable rough fish taken by state crews from inland waters has been constructed during the summer of 1936. The product from this cannery is being used as food for mink, fox, and other fur-bearing animals propagated on the State Experimental Game and Fur farm at Poynette. It is also used as food for adult trout, bass, and other fish which are kept for propagating purposes in the state fish hatcheries.

It has been shown that even game fish fry which are being held in the trays and ponds at the hatcheries will eat this product, and further experiments are being carried on to ascertain if they will show progress on a diet of this kind between the fry and fingerling stage.

### LIST OF OPERATIONS

During 1935 and 1936 rough fish removal operations have been carried on in the following waters of Wisconsin:

### Rivers:

# Lakes:

Big Green	Beaver Dam	Delavan
Wisconsin	Oconomowoc	Tishigan
Little Green	Rock	Twin
Fox	Mendota	Mason
Little Butte des Morts	Monona	Dead
Big Butte des Morts	Waubesa	Ponds
Poygan	Kegonsa	Comos
Winneconne	Koshkonong	Noquebay
Winnebago	•	

### Bays:

Sturgeon Bay	Riley's Bay
Little Sturgeon Bay	Sawyer Harbor

# Mill Ponds:

Waterloo	Belleville
Rockdale	Marshall
Kingston	

The removal of garfish is requested by many individuals in various localities, and this type of fishing operation can be conducted successfully only at certain times of the year when the gars congregate. The removal of eelpout or lawyers is another phase of removal carried on by the Conservation Department in large numbers during the winter months under the ice and with stationery fyke and hoop nets.

# PUBLIC COOPERATION

The Conservation Department needs public cooperation in the furtherance of its plans for proceeding on a sound, sensible, business-like basis utilizing all the rough fish possible for food, and marketing such fish as can be sold, so that the funds derived therefrom can be used for the purpose of the removal of more undesirable fish.

We believe that the rough fish removal program carried on by the state of Wisconsin at the present time is the most efficient and successful of any similar program in the United States.



Pushing brush raft out on ice-covered Pine Lake in Lincoln county. When the ice melted, this brush tangle, weighted with sand bags, sank to the bottom of the lake, where it forms an ideal refuge for young fish.



This stream deflector in Pine River, Waushara county, speeds up the flow of the water, making it cooler and more inviting to trout.



Mongolian Pheasants. (Top) Brooder youngsters at three weeks. (Center) The finished product—eighteen weeks. (Bottom) Time for supper—six weeks.

# GAME

During the past biennium the game division has made progress in the correlating of all its projects toward a definite objective—the efficient, practical management and protection of game through a well-outlined, comprehensive program. Since its inception in 1928, public interest has increased remarkably, and hundreds of sportsmen's organizations throughout the state lend the whole-hearted support so vital to the accomplishment of its manifold aims and purposes.

Despite this, however, the game division realizes that too many sportsmen and other individuals in the consideration of local problems often fail to recognize that this correlation of projects is a fundamental rule of game management. The major problem of the division continues to be the uniting of all game activities into a general plan that is satisfactory to the people of Wisconsin as a whole.

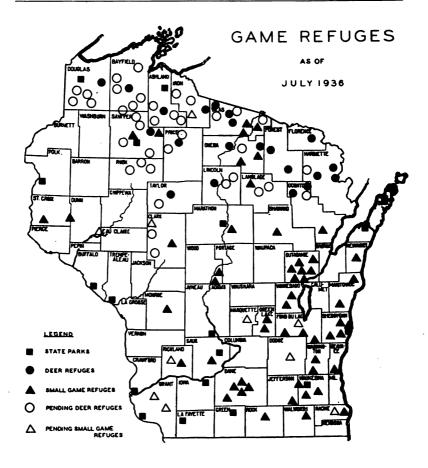
# GENERAL GAME ADMINISTRATION

Total game division disbursements for the years ending June 30, 1935 and June 30, 1936, amounted to \$102,185 and \$101,623.23, respectively. These expenditures covered general game administration; hunting and trapping regulation; state experimental game and fur farm and auxiliary game farms; land purchases; exhibits; wild life refuge program; cooperative projects including federal, state, and educational institutions; surveys and investigations; food and cover restoration; winter feeding; public hunting grounds; administration of commercial game, deer, and fur farms; licensed shooting preserves; reports on game and trapping seasons; research; and miscellaneous game projects and services.

# **GAME REGULATIONS**

In accordance with the authority conferred upon it by the 1933 legislature, the Wisconsin Conservation Commission is responsible for the regulation of the seasons on all species of game and fur-bearing animals. In order that this may be accomplished to the satisfaction and ultimate benefit of the greatest number and in conformity with the requirements of existing game crop conditions, the commission has adopted the advisory game committee system whereby the people of the state themselves, represented by a committee of three in each of the 71 counties, voice their opinions and make their own recommendations for the formulation of hunting and trapping laws each year.

Game committees are elected in the spring of the year by popular vote. County public hearings are then held at which a vote is taken



on game and fish questions as set forth in the annual game and fish questionnaires prepared by the department. At a general mee.ing of committees and conservation wardens final recommendations are made to the Conservation Department. On these are based almost all of the regulations established by the commission pertaining to the taking of game and fur-bearers.

Although the committee system has been in operation only three years, it has unquestionably demonstrated its worth. The department looks to it—in conjunction with an increased force of game technicians—as the most practical solution to the problem of season regulation as time goes on, and its purpose and value become more widely realized.

## EXPERIMENTAL GAME AND FUR FARM

Final dismantling of the Fish Creek and Moon Lake game farms was completed in 1935 and 1936. All propagation field services of the game division are now centered at the State Experimental Game and Fur Farm at Poynette.

There are several definite reasons for the establishment of the State Experimental Game and Fur Farm in Wisconsin. First, it is general game headquarters. It serves as a base for the propagation and stocking of exotic upland game birds and fur-bearing animals, as well as for public hunting ground, wild life refuge, winter feeding, and miscellaneous management activities, including contact by the game farm force with sportsmen's clubs. Game management education, scientifically managed demonstration areas, experimentation, laboratory facilities, and a clearing house for confiscated live animals and birds constitute some of its major services. Intensive research and study of parasites, diseases, breeding, housing, rearing, and feeding of game birds and fur-bearers are regularly carried on for the benefit of sportsmen's organizations, cooperative individuals, and commercial game and fur farmers.

As a result of a special experimental rearing project undertaken this past year to determine the practicability of distributing day-old pheasant chicks instead of allotting pheasant eggs to cooperators for



Laboratory and Assembly and Dining Hall (Pheasants holding field in foreground)

hatching, the present program of game bird distribution will continue on a greatly enlarged scale. The superiority of the new method is clearly demonstrated by the fact that 80 to 92 percent of the chicks sent out to 14 sportsmen's clubs and reared by electric brooders were raised to a stocking age of eight weeks. Under the old plan egg distribution produced an approximate average of only twenty birds reared to stocking age out of each one hundred eggs allotted.

Further planting has been carried on of the rarer species of pheasants to discover varieties that will thrive and propagate successfully in the northern and central counties.

Attempts are also being made to stock wild turkeys in Wisconsin with a view toward their eventual increase to a point where a short open season on them is possible. Over five hundred were reared at the farm during 1936 for fall stocking in certain central counties having natural food and cover particularly suited to these splendid game birds.

A report of bird and egg distribution for the biennium and also an inventory of stock on hand will be found on page 177.

The experimental fur farm offers a direct asset to the hunter, trapper, and commercial breeder by making available to them the knowledge obtained through scientific investigation of disease control among fur-bearing animals and the latest data on proper feeding, breeding and housing. In view of the growth of fur production in Wisconsin, the farm's contribution toward its continuance as one of the state's important industries is of considerable value.

Another interesting project is the stocking of raccoon throughout the state. One hundred and twenty black and 179 gray raccoon were liberated during the biennium, and 575 blacks are being held at the farm for fall distribution and breeding stock. Breeding experiments at Poynette have shown that the black raccoon mated with the native gray produces a uniform, rich, dark gray fur, and the game division is endeavoring to bring about improvement in color and quality of fur in the wild state by the stocking of blacks. The department plans to release approximately a thousand of these during 1937.

This particular program is of great interest to individual sportsmen and sportsmen's groups who are anxious to cooperate in the stocking of the black raccoon, which will remain on the protected list the year round in order to permit them to propagate sufficiently to warrant their being taken by hunters and trappers.

Experiments are also being conducted with the karakul sheep to determine whether this animal—from which three types of fur known as Broadtail, Persian Lamb, and Caracul are derived—can be profitably raised by the Wisconsin farmer. Present breeding stock now numbers 27.

The services of the diagnostic laboratory are many. One of the most important of its many functions is its use as a clearing house for dead wild game. Hundreds of commercial game breeders and fur farms will benefit from its diagnostic and veterinary functions.



One row of the State Experimental Game and Fur Farm electric brooder section.



Raccoon breeding pens.

In the past two years 10,791 cases have been handled and 47,000 miles covered by the pathologist in extending such services.

Principal construction at the farm during the biennium included an office, feed, and equipment building; lecture hall and community building; manager's residence; storage barn; combination feed house, slaughterhouse, and refrigeration plant; a carpenter shop and machine shed; 75 raccoon and fox pens; 50 mink pens; and 2,000 feet of fur farm and 5,000 feet of game farm fencing. The Works Progress Administration contributed labor, material, and equipment amounting to \$51,779.69, while the state expended \$17,867.43 on this program.

Among miscellaneous improvements at the state's expense were three thousand feet of game farm fencing; erection of a stable; 46 brooder houses and runs; land improvement; building of roads; general landscaping; and the planting of 3,500 coniferous trees.

#### WILD LIFE REFUGE PROGRAM

In the efficient administration of our game program the importance of an adequate system of game refuges, located where there is a natural, abundant supply of food, cover, and water, cannot be overemphasized. A supreme court decision rendered in June, 1934 on the legality of areas already set up made necessary the re-establishment of the entire system of wild life refuges, which now total 147,930 acres and are maintained for the improved management of four distinctive game types.

Of first importance in this program is a system of white-tailed deer sanctuaries. Approximately sixty-seven thousand acres were added during the biennium, and investigations prior to the 1936 deer season were conducted preparatory to the establishment of 46 additional deer refuges in 18 northern counties, with a proposed total of two hundred thousand acres.

Next in the order of their importance are the upland bird refuges primarily for the different varieties of pheasants; waterfowl refuges established mainly as breeding and resting grounds for wild ducks; and sanctuaries maintained for the benefit and protection of muskrat seed stock.

Twenty-five miscellaneous small game refuges were also inspected preliminary to their establishment. Expenditures for this activity for the biennium totalled \$9,648.06. Effective and pending refuges are listed on pages 179, 180, 181 and 182.

# GAME FOOD AND COVER RESTORATION

One of the principal causes for the decrease or depletion of a game crop is lack of environment conducive to its increase and protection. To offset the destruction of natural game cover and food in Wisconsin due to the growth of industry, a well-balanced game program must provide for the resupplying of these two essentials. The Resettlement Administration restoration project being carried on in the counties of Jackson, Wood, and Juneau, with which the Conservation De-

partment cooperates in an advisory capacity, is an example of this type of management.

The game division is endeavoring to determine, through experimental plantings and pheasant crop study, the most desirable varieties of food for game birds with respect to cultivation, availability, palatability, preference, and habit. In the spring of 1935 sufficient seed to plant approximately 250 acres of food patches was distributed. Although many of these experiments proved unsuccessful due to heavy spring rains and early frosts, it is evident that the food patch will play an important part in the winter feeding of birds. In 1936 over three tons of seed were distributed to cooperators, the major portion of this being Wheatland Milo maise and Tartary buckwheat, and the balance amber cane, hemp, Jerusalem artichoke, and Giant Russian sunflower.



Model Feeding Station.

#### WINTER FEEDING

During the winters of 1935 and 1936 the game division, in cooperation with sportsmen's organizations, interested individuals, and farmers, maintained an estimated sixty thousand feeding stations for the benefit of pheasants, sharp-tailed grouse, prairie chicken, Hungarian partridge, and bobwhite quail. Winter feeding contests were conducted, with upland game birds as prizes. A list of winners and awards is given on pages 183 and 184.

Through radio talks, news releases, circular letters, and addresses the public was urged to join with the department in an effort to prevent the loss of birds during the severe winter months. A Milwaukee grain dealer contributed over eighty tons of grain for this purpose, and game division funds were allotted to conservation wardens, who were given charge of the purchase of feed in their respective localities. The department winter feeding bulletin was revised and distributed to sportsmen and farmers. Game division expenditures in connection with winter feeding amounted to \$10,247.15, which, incidentally, was but a small percentage of the amount spent by cooperators. This figure also includes the purchase of alfalfa hay and commercial ration for emergency feeding of deer in the northern counties.

#### PUBLIC HUNTING GROUNDS

Due to lack of funds little progress has been made in the acquisition of public hunting grounds to balance the areas restricted to hunting under the refuge system. With the proposed program of expansion it is hoped to acquire two hundred thousand acres for this purpose in southern Wisconsin counties.

# LICENSED SHOOTING PRESERVES

Wisconsin now has sixty licensed shooting preserves totaling fortyeight thousand acres. Twenty-nine have been added since July 1, 1934. A check of stocking reports indicates that 5,468 pheasants were released on these areas between July 1, 1934 and June 30, 1935. Similar statistics for the past fiscal year are not available as yet.

The establishment of these preserves provides the release of more than three thousand pheasants annually in excess of the number taken by shooting and at only a small cost to the state. An additional advantage is the fact that shooting preserve operators are interested in the winter feeding of birds on their particular areas. While the present preserve system is not entirely ideal—and there is some opposition to it in certain localities—it is the belief of the game division that the advantages it offers are sufficient to justify its continuance, and that existing objections may be overcome by eventual improvement of the plan of operation.

#### COMMERCIAL FARMS

During each of the fiscal years the game division supervised the licensing and administration of approximately one thousand commercial game, deer and fur farms.

While the game breeding industry has declined considerably within the past three or four years, the fur farm industry remains more stable.

The number of commercial deer farms is only slightly higher than two years ago, since there are now 29 farms as compared with 23 in 1934.

#### **EXHIBITS**

Twenty-seven exhibits were set up by the game division during the two-year period at a total cost of \$10,700, of which \$5,500 was allotted by the emergency board. These exhibitions included displays at the Chicago Outdoor show; State Fair and Milwaukee Exposition; National Game Bird show at Doylestown, Pennsylvania; La Crosse Interstate Fair; Eau Claire Poultry show; and the Wisconsin Centennial. Because funds were not available for this purpose, it has been necessary during the past year to refuse requests for all exhibits except where the sponsors agreed to pay any costs incident to the setting up of displays or where funds were allocated by the emergency board. The necessity of curtailing this particular phase of the division's activities is most unfortunate, for these exhibits are of a great deal of value in educating both young and old in the many phases of and the genuine need for conservation.

A zoological exhibit of forty species of native and exotic upland and migratory game birds and twenty species of game and fur-bearing animals has been set up at Poynette. Interest in the state's propagation activities is evidenced by the fact that forty thousand people inspected the farm during the period from July 1, 1934 to June 30, 1936, including visitors from Wisconsin, 37 other states, and two Canadian provinces. To efficiently handle the situation, a uniformed guide service was established providing for conducted tours of inspection. A guide book was printed for distribution to visitors to inform them of the purposes and services of the farm.

Research work in the two-year period has consisted principally of experiments and studies in connection with the breeding, housing, rearing, and feeding of fur-bearers and native and upland game birds; cover requirements; pheasant crop examination; effect of predators; control of parasites and diseases; and grouse and rabbit mortality due to cyclic fluctuations.

### GAME CENSUS AND TRAPPING REPORTS

The tabulations of game census and trapping reports appearing on page 178 present interesting comparisons of the kill of the various species of game and the taking of fur-bearers. Notwithstanding that probably less than half of the licensees have made a practice of returning these reports, they are of definite value in estimating the annual game and fur crop and in many counties form a basis for the formulation of season regulations on the different varieties. Intensive efforts to secure more complete returns are now being made, since hunters have become more accustomed to the requirement.

# COOPERATIVE GAME PROJECTS

Cooperative game projects during the biennium consisted of various department services with respect to management and regulations in cooperation with the U. S. Bureau of Biological Survey, U. S. Forestry

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State Pathologist in Laboratory at the State Experimental Game and Fur Farm.

Service, Resettlement Administration, Soil Erosion Service, National Youth Administration, Civilian Conservation Corps, Works Progress Administration, and the state universities of Wisconsin and Minnesota.

These projects included department services in an advisory capacity in the general conservation program of the Resettlement Administration in the central counties, the establishment of certain regulations for the benefit of national forests, collaboration with the Civilian Conservation Corps in investigative work and improved management in the northern counties, the furnishing of specimens for analysis, such as deer, grouse, and snowshoe hares, to the University of Minnesota, and other related cooperative efforts.

Under a Works Progress Administration project, the construction of 210 pheasant holding pens and 7,000 winter feeding hoppers was undertaken, the latter to be distributed to all of the counties for use in the winter feeding program.

# **MISCELLANEOUS ACTIVITIES**

Trapping and restocking of one hundred and fifty white-tailed deer and three hundred miscellaneous game birds and fur-bearing animals, including pheasants, Hungarian partridge, and raccoon, was accomplished.

Approximately one hundred thousand miles of service by game and fur farm employees was furnished to sportsmen's organizations, commercial game farmers and fur breeders, farmers, and other cooperators.

A predator control contest, awarding certificates of merit to 12 sportsmen's groups, resulted in the extermination of 3,646 crows, 826 crows eggs, 1,040 snapping turtles, 7,385 striped gophers and 1,000 starlings.

Three hundred public addresses or radio talks by the superintendent of game management and the game division section chiefs added to the effectiveness of the program.

#### EXPANDED PROGRAM

The game division, because of lack of finances and personnel, is hard pressed to meet the daily increasing demands upon it. The program submitted for the next biennium is a complete, well-rounded plan that will be of direct benefit from economic, esthetic, and social aspects. It is based upon efficient administration and management and the great need for additional research.

Besides enlarging its force of game technicians who will work primarily on the problems of native game, the division expects to embark upon a greatly expanded program which will mean the eventual annual production and stocking of a minimum of one hundred thousand game birds of all varieties and 1,200 fur-bearing animals, principally black raccoon and red, cross, and silver fox. There is also under contemplation the expansion of diagnostic laboratory personnel and equipment; collection and maintenance of the most complete zoological exhibit in the central west; provision of complete game educational facilities for the benefit of the Wisconsin public; the annual display of not less than 50 game division exhibits; the most comprehensive refuge program in the middle west; the eventual mapping and posting of existing public hunting grounds; and the acquisition by lease or purchase of not less than two hundred thousand acres of land in southern Wisconsin counties for this purpose.

Wisconsin sportsmen do not realize the tremendous possibilities of a fully developed management program. Census reports for the past four years have clearly proved that the annual kill of native game per hunter exceeds that of any other state in the United States. Even with the heavy loss of game in 1934 and 1935 due to cyclic fluctuations, the annual take remains at a minimum of approximately four million pieces.

There is actually no limit to the possibilities of game expansion in Wisconsin. Favored by basic environmental conditions, the people of the state have an opportunity to develop their game resources to a point unequalled by any state in the union.



Wisconsin Conservation Warden.

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# LAW ENFORCEMENT

The necessity for the existence of a law enforcement division in the Conservation Department is based on the idea that wild life in Wisconsin is the property of the state and therefore belongs to all the people in the state.

In order to insure and protect the rights of all the citizens in the matter of taking game and fish, laws regulating seasons, methods of taking, size, and quantity are placed on the statute books. These laws are designed to give each person an equal opportunity with his fellow citizen to share in the enjoyment of the wild life resources of the state.

Obviously, we find a number of individuals who violate the game and fishing laws just as we find persons violating other laws. The taking of game and fish illegally means the utilization of our wild life by comparatively few individuals at the expense of the many who are law-abiding.

The primary purpose of the law enforcement division is to enforce the laws providing for the protection and legal taking of our wild life under conditions which, from a sound conservation viewpoint, have been deemed practical and wise. Continued taking of game without restrictions or enforcement resulted in great inroads into the game and fish supply of our state.

#### EARLY HISTORY

As early as 1887 the legislature, recognizing the need of protection for our wild life, made provisions in this direction. Four offices for the appointment of game wardens and three offices for fish wardens were created. These offices were abolished four years later. In their place was selected a state fish and game warden with the power to appoint deputy wardens in each county.

The State Conservation Commission, as was previously mentioned, was established in 1915. With its creation the present law enforcement division, under the direction of a chief conservation warden, came into existence; also, the title of game warden was changed to conservation warden. This change of title denoted the wider scope of activities of wardens in the field, including broader and more comprehensive aspects of conservation than were embodied in the more limited title of game warden.

# WARDEN DUTIES

Each year finds the warden employed in new and more varied activities making greater demands on his time. Activities which may or may not be directly related to problems of fish and game are carried on in cooperation with all other divisions. In the past year or two much time has been devoted to the supervision of varied WPA conservation projects. Forest protection during the drought years has demanded greater assistance from the force than ever before. Reports for research work—both state and federal—supervision of fish planting, winter feeding of game birds, and numerous other activities in addition to the regular enforcement work, make the position of conservation warden in our state a full time job.

# PROTECTION NEEDS

When one considers the area of Wisconsin with its 56,000 square miles, the outlying boundary waters, the thousands of inland lakes, thousands of miles of rivers and streams, the large forest regions, as well as a vast agricultural area inhabited by game, the responsibility and magnitude of the task of protecting our wild life resources becomes very apparent. With a force of only 68 regular wardens, the territory patrolled by each is far too extensive for the enforcement which the Conservation Commission desires to furnish the public. Even with the additional seasonal wardens employed to assist the regular force during the spring and fall when violations are most prevalent, the number is still inadequate and not in proportion to the large area to be covered. Problems of the law enforcement officers become increasingly difficult with the growth of game bootlegging, fur racketeers, opening of former game sanctuaries to fast travel on newly constructed roads, and ingenious schemes devised by violators. Areas to be patrolled are increasing faster than the patrolling force, and it is hoped as soon as possible to overcome this state of unbalance. There is a constant demand on the part of communities for additional wardens, but at present, as in the past, the funds necessary to meet these demands are not available. Until such time as additional monies are provided, it will be impossible to increase the regular force.

There is an unquestionable relationship between the number of offenses or violations occurring and the likelihood of apprehension. The greater the odds in favor of the violator going undetected, the greater will be the number of violations. For example: in traffic regulations fewer infractions occur at those places where an officer is stationed or frequently seen than in districts where an officer is seldom in evidence. In the same way, if it were possible to increase the number of wardens, thereby reducing the area patrolled by each, the less likelihood there would be of violations occurring due to the greater possibility of apprehension and arrest of the violator.



# STRICT LAW ENFORCEMENT

Conservation files show that during the past biennium 4,203 arrests were made resulting in 3,845 convictions. That 91.5 percent of the arrests resulted in conviction is indicative of good judgment on the part of the wardens, as well as ability to present convincing evidence in cases of game law violations.

During the past years of financial stress there has been a tendency on the part of the public to be very lenient and sympathetic in its attitude toward the violator. Such an attitude in itself reflects more shameless activity on the part of the many wishing to take advantage of hard times as an excuse for violating. The failure to impose penalties on persons admittedly guilty is discouraging to both conservationists and law enforcement officers. Public sympathy for violators, combined with a lack of cooperation on the part of courts in certain sections of our state, presents a decided handicap to effective law en-



Beaver control crew at work.

forcement. The best law observance prevails in communities where the public and the courts recognize the need of impartial and adequate punishment of those violating hunting and fishing regulations. A minimum of violations occur where such conditions exist.

Duties of the law enforcement division have become so complicated and numerous during the past few years that early in the spring of 1936, an assistant chief warden was appointed. In addition to helping with routine work and making numerous field and inspection trips, he supervises the administration of the state bounty law, deer damage claims, the issuing of various types of permits, such as ferret, rifle, and game transportation permits, and the licensed fur farms of the state. From July 1, 1934 until July 1, 1935, \$37,205 was paid in bounties for mature and cub wolves and wild cats or lynx. During the last fiscal year 511 more animals were bountied than in the previous period, and \$8,120 more was paid out for this purpose.

Three hundred and fifty-four deer damage claims, amounting to \$10,520.16, were paid in the two-year period. They averaged \$29.75

per claim, and were paid to farmers to reimburse them for crops damaged by deer.

A special section has been set up in the law enforcement division for the control of predatory animals and beaver. Two competent men, one for the northwest and one for the northeast part of the state, have been placed in charge. Complaints investigated and acted upon during the biennium numbered 364, and usually involved flooded land resulting from beaver flowages. In such cases beaver are either transplanted or trapped off and the dams are removed.

# COOPERATION OF CLUBS AND CITIZENS

Conservation clubs throughout the state have been very effective educational agencies in creating the proper attitude toward good law observance—not only in the case of members—but upon others in their communities. The establishment and activities of a good conservation club have frequently resulted in the transformation of a locality known for numerous violations into a territory of comparatively few transgressions. Efficient law enforcement is possible only when a friendly spirit and cooperative effort exists between the public and the enforcement agency.

One warden has been assigned to carry on educational work throughout the state among schools and organizations interested in conservation. Formerly a teacher, this man has the necessary background to obtain the right sort of cooperation from schools and is invaluable to the department in the task of working jointly with the department of public instruction on the conservation curriculum recently provided for by statute.

Ever-increasing numbers of our citizens are awakening to an understanding of the policies and program of the Conservation Commission and the great need for conservation activities. While it is important and desirable that the public be sympathetic and understanding in conservation matters, such interest draws attention to the need for increased activities in the various fields. This results in demands on the various divisions far in excess of the funds, organization, or personnel necessary to meet them. In the law enforcement division such demands are for additional wardens.

#### FINANCES

This leads to the problem of finances. Since the financing of conservation in general is largely dependent upon the sale of various types of licenses, it is an important duty of the law enforcement division to see that the proper licenses, as required by law, are held by individuals. Without enforcement in the field by wardens, the sale of hunting, trapping, and fishing licenses would become so negligible as to severely handicap the Conservation Department.

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A new system of checking fishermen for licenses by groups of wardens for the past two years has resulted in a large number of arrests and a greatly increased license sale. The majority of these arrests were made for fishing without a license when a license was required, or for using a borrowed license. It is very evident that without intensive checking many thousands of dollars annually will be lost to the state. Such loss of revenue necessarily curtails the propagation and distribution of fish as well as many other activities of the Conservation Department which are made possible by money received from the sale of licenses.

# HIGHER WARDEN QUALIFICATIONS

The large number of men participating in the competitive civil service examinations conducted by the State Bureau of Personnel for the purpose of selecting candidates for the positions of conservation wardens makes it possible to demand higher qualifications than ever before. With as many as 1,400 taking the examination for the comparatively few vacancies occurring, it is possible to find men of excellent ability. The increasingly varied duties demanded of the field personnel in the law enforcement division makes more stringent requirements not only desirable but imperative.

The qualifications necessary before an applicant may take the conservation warden examination are: that he be not less than 21 nor more than 30 years of age; not less than five feet, nine inches in height; and not less than 160 pounds in weight. All applicants must pass a very rigid physical examination and have an education equivalent at least to that of a high school graduate. Careful consideration is given to personal qualities and characteristics needed for efficient law enforcement work. It is highly desirable and to the advantage of the candidate to be able to identify birds, animals, and fishes native to Wisconsin, and to be familiar with their habits and natural habitat. A thorough knowledge of our conservation laws is essential.

If the candidate is successful in passing the examination with a grade which will permit the Bureau of Personnel to certify his name to the Conservation Commission, he is employed as a seasonal warden to assist one of the regular conservation wardens. No seasonal warden is given a permanent appointment until he has completed at least six months probationary period under the supervision of a regular warden, and has acquitted himself in a satisfactory manner.

Wardens are not rated according to the number of arrests made, but rather on their ability to curb and prevent violations in their respective territories. The guiding philosophy of the law enforcement division has always been the prevention of violations. The arrest of an individual is encouraged only when the officer is thoroughly convinced of the guilt of the person apprehended.

# EFFICIENCY AWARDS

The Noyes Conservation Warden Efficiency Award for 1934 was conferred upon Conservation Warden Peter Diedrich of Milwaukee during the first year of this biennium. The award for 1935 has not been given as yet.

The award, which is presented by former Commissioner Haskell Noyes of Milwaukee, is intended to imbue the conservation wardens with a spirit of friendly competition. The winning warden each year receives a gold watch, and his name is engraved upon a silver plaque which hangs in the Madison office. He is selected upon the efficiency with which he conducts his cases and seizures, his citizenship and general appearance, his cooperation with other divisions, his care in making reports and answering inquiries, and upon any unusual and additional service rendered to this department or to the public.



Auction of state-confiscated furs.

#### WARDEN RETIREMENT PENSION

The 1934 legislature created section 23.14, known as the Conservation Warden Pension Fund Law, which provides for the retirement under pension of men who have been employed as wardens for a period of at least twenty years, and also provides benefits for the widows and families of wardens who are killed in active service.

The benefit of such a law is that it provides for the retirement of men who have reached an age where they can no longer perform the

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arduous duties required of them. It permits the Conservation Commission to employ active young men in the place of the retired wardens, thus insuring the public of more efficient law enforcement.

During this biennium five wardens have been retired and receive one-half of their former salary as pension. All of these men had been employed for at least twenty years as conservation wardens and had made the necessary applications for pensions.

This law requires that three wardens, one commissioner, and the state treasurer act as a board of directors. State Treasurer Robert K. Henry, Commissioner Louis M. Hobbins of Madison, John D. Worden, Conservation Warden at Plainfield, Andrew Sampson, Conservation Warden at Stoughton, and Edward Apel, Conservation Warden at Eau Claire served as the first board of directors. This board is required to make a report to the Governor once each year. The warden members are elected by the warden force annually.

Under this plan three percent of each warden's salary is turned into the pension fund, together with one-half the amount received from the sale of confiscated articles.



Wisconsin white-tailed deer.

#### PUBLIC COOPERATION

With education resulting in a better understanding of, and a better attitude toward law observance in regulations pertaining to our wild life, combined with an efficient law enforcement organization in the field, the hope of greater protection of fish and game in our state will be realized. The cooperation of the public will go far to make up for the deficiency due to the lack of a sufficient number of wardens.

So far as the rank and file of offenders is concerned, education will do much toward decreasing their number. The smaller this group, the more intensively can the efforts of the wardens be directed to that other group which, for selfish or mercenary reasons, continues to violate. Education probably never will reach those persons who tap our game and fish resources for commercial purposes.

Neither education nor law alone will solve the problem of satisfactory and efficient law enforcement, but by combining the two, much may be anticipated by those interested in the future of Wisconsin's wild life resources.



Recreational Publicity Booth at the Wisconsin 1936 Cen Exposition at Madison.

rectly or indirectly dependent upon tourist or vacation business, and (b) efforts directed toward coordinating and encouraging the attempts of all worthy agencies now or in the future endeavoring to popularize Wisconsin's tangible recreational assets.

Ten days after this division was established, a carefully prepared plan of operation was completed and applied. The plan, which is still being followed, covered administrative organization and budgetary breakdown, and took into account all of the foregoing governing factors coupled with a clear conception of the statewide aspects of the program and the pitfalls to be avoided in carrying it through to the successful attainment of it first year's objectives.

Attention was immediately concentrated upon the preparation of recreational literature; selection of advertising media; drafting of advertisements and scheduling of display space; preparation and dissemination of recreational publicity news releases and establishment of advantageous out-of-state cooperative contacts and literature distribution points. These activities and many others incident to the establishment of this new division were carried on simultaneously, but in this report will be treated separately for purposes of clarity.

#### **PUBLICATIONS**

"Follow the Birds to Vacation Land, Wisconsin" was selected as the name of the main piece of illustrated literature intended primarily for distribution outside of the state. This book was urgently needed to fill requests stimulated by advertisements scheduled to appear monthly beginning February 15, 1936 in three outdoor magazines.

Invitational in nature of approach, "Follow the Birds" pointed out the vast statewide recreational attractions of Wisconsin and used many illustrations to support this theme. Two colors, blue and black. were used to produce this attractive 24-page book, nine by twelve inches in size. Honesty of statement governed the treatment of every subject presented, this policy of strict fidelity being the only direct route—first, to reader confidence, and finally to satisfied tourist guests who find things "just as advertised" in Wisconsin.

The opening paragraphs of "Follow the Birds" are quoted to illustrate this honesty of invitational appeal:

"Wisconsin is a vacationist's paradise within easy reach of your own door! Wise old waterfowl make Wisconsin their summer home. Why not you?

"Nature has conspired to give the state of Wisconsin qualities, resources and advantages which make the state the nation's ideal

summer playground.

"When summer sun beats down with merciless intensity on the states of the south, southeast and southwest, balsam scented zephyrs fan the brow of Wisconsin, cooled by the breezes over thousands of square miles of lakes, and by the shade of trees in extensive forests.

"Woolen clothing and sweaters are an important part of summer wardrobes in Wisconsin, for the nights are usually cool.

Along Lake Michigan and Lake Superior as well as through the lake and forest region the warmth of a fire in the evening is frequently welcome even in midsummer.

"It is climate, first of all, that leads millions of persons each year to spend their vacations in Wisconsin.

"But Wisconsin has infinitely more than delightfully invigorating summer weather to offer. All summer recreational and sporting facilities flourish within the state. Bathing, fishing, boating, summer sports of all kinds, beauties of nature to see and to enjoy, primitive northwoods, delightful roads to roam—you will find them all at their best in Wisconsin, where friends and nature to see and the state of the state of the state. ture meet.

"So the State of Wisconsin invites you to come and enjoy your summer vacation with us, to Follow the Birds to Vacation Land,

Wisconsin."

The book closes with the following paragraph expressive of the fact-founded nature of its contents:

"We can only ask that you come to Wisconsin and find these things as they are, for we know that if you do come you will ever after wear a little bit of our Wisconsin in your heart."



A counter display used to sell to the nation a vacation in Wisconsin.

"Among the State Parks and Forests of Wisconsin" was prepared by this division in cooperation with the division of forests and parks. This illustrated book served as a lead piece for the State's fourteen separate park and forest folders also prepared by this division, onehalf the costs of publication being defrayed by the parks division.

Space does not permit the full enumeration of all printed material, which included the Wisconsin "Fun Map", two-color letter-heads and envelopes, "Great Outdoors in Pictures" rotogravure, special large literature envelopes, envelope stickers and some twenty additional items. Printed material of all kinds was produced to a total of 1,125,500 units, of which 867,117 units were distributed largely outside of the state during spring and early summer months. Postage costs alone approximated \$1,000 per month during the height of the rush season.

# ADVERTISING

All advertising copy was drafted in strict keeping with the "we can deliver what we offer" policy, which alone can serve as a secure foundation for lasting satisfaction. Advertisements were scheduled to appear in three outdoor magazines for five months spanning spring and early summer. The following quoted paragraphs serve to illustrate the educational nature of copy developed for use in outdoor magazines throughout the campaign:

"Wisconsin's conservation program assures good fishing - this

year and for years to come.

"Good fishing is no longer a gift of the gods. The plain and simple fact is that you find good fishing where there is good fishing water and where there is sound and constructive fish conservation and propagation work being done.

"Wisconsin, with fishing waters unexcelled in the United States, operates a fish conservation and propagation program that definitely assures not only maintenance of the fish population, but a

steady increase.

"We invite you to come, fish and vacation in Wisconsin. If you're one of those fellows who has found himself saying in recent years, 'it isn't the fish, it's the sunshine and fresh air I like,' come to Wisconsin and recapture the thrill of the arching rod and the lunging muskie, bass, pike or trout. The sun is always brighter and the fresh air fresher when you have a big one on your line."

Newspaper ads were scheduled to appear weekly during the period between April 20 and July 7 in the 27 leading newspapers covering the ten or more central states from which Wisconsin logically hoped to draw its tourist guests. The cities in which travel page newspaper ads appeared were: Minneapolis, St. Paul, Omaha, Lincoln, Desmoines, Davenport, Kansas City, St. Louis, Chicago, Springfield, Peoria, Fort Wayne, Indianapolis, Evansville, South Bend, Terra Haute, Cincinnati, Dayton, Columbus, Louisville, Memphis and Nashville. All ads were keyed to enable definite determination of results.

The following display ad title lines will serve to indicate the statewide nature of the invitation extended in keeping with the State's recreational slogan, "Relax in Wisconsin, Where Friends and Nature Meet":

"Cool Breezes are Blowing in Wisconsin"
"Follow the Birds to Vacation Land, Wisconsin"
"The Whole State Invites You to Relax in Wisconsin"
"Pitch Your Tent in Wisconsin's Paradise for Campers"
"Come to Wisconsin and See the World"
"Weather is Air Conditioned by Nature in Wisconsin"
"Get Your Muskie in Wisconsin"
"There's a Reason Why Fishing is Good in Wisconsin"
"They're Sleeping Under Blankets in Wisconsin"
"Nature Has Been Kind to Wisconsin"
"There's a Lakeside Cabin Awaiting You in Wisconsin"
"Travel in Comfort Over Wisconsin's 'Roads to Roam'"

Every ad carried a keyed coupon inviting inquiries to request descriptive literature listed thereon. Inquiries reached 387 in a single day, and numbered close to 1,500 per week during the rush season.

To supplement outdoor magazine and newspaper advertising, 45 highway field signs were used at key points in Iowa, Missouri, Illinois, Indiana, Ohio, and Kentucky. These signs, 12 feet wide and 18 feet high, were enameled in three colors and showed the outline of the state in cut-out. Definitely favorable results have accrued from this form of advertising, which should be increased in scope as rapidly as funds permit.



385,000 envelope stickers printed in two colors, red and blue, were provided for use by Wisconsin cooperators on mail going outside of the state.

# COOPERATIVE CONTACTS

News stories designed to whet the appetite of readers for a trip to Wisconsin have been prepared and released at the rate of two each week to more than two hundred newspapers in 27 states. This program has been welcomed by newspapers and will be continued without interruption throughout the year.

Cooperative contacts have been established with all railroads entering Chicago, which serve as feeder lines enroute to Wisconsin; with all the large oil companies; with bus lines; with motor clubs; and tourist bureaus. These, with information bureaus maintained by chambers of commerce and by newspapers, form a network for literature distribution without cost extending from coast to coast and as far south as Florida and New Orleans.

For use at literature distribution points a counter display card was designed with "take one" pockets for the small "Relax in Wisconsin" leaflet embodying a coupon for convenience in ordering recreational literature. One thousand of these counter cards were in use during the season.

Large window display sets featuring Wisconsin's recreational attractions and using five flying ducks to stress the "Follow the Birds to Vacation Land, Wisconsin" idea were also provided for use of co-



In the clear rushing waters of this Wisconsin stream the trout thrives, and the angler shown above has picked a good exciting spot.

operators. Appearing in new locations each week, 150 window display sets totaled not less than one thousand window weeks during the season, and were seen by millions of potential Wisconsin vacation guests.

#### RESULTS

Space limits do not permit the detailed presentation of such activities as recreational photographic service and feature articles to newspapers and magazines on call, speaking engagements, radio talks, and encouragement to regional recreational advertising organizations in an effort to coordinate their operations with the state's program. These and numerous other parallel activities have, however, been a definite and important part of the work of this division.

Results which speak for themselves are expressed in letters received from resorts, hotels, and chambers of commerce throughout the state. Almost unanimously they report "more out-of-state inquiries", "more out-of-state guests", and "season got under way earlier and better this vear".

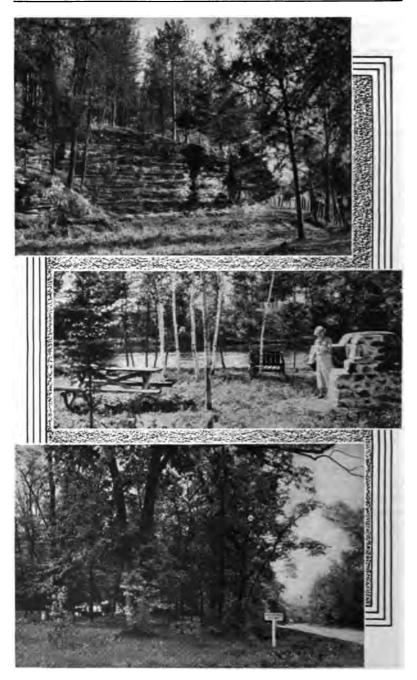
Predicting success for the State's first recreational publicity and advertising campaign, the Sheboygan Press in early July commented as follows:

"An indication of the increasing tourist trade resulting this year from the slogans 'Relax in Wisconsin' and 'Follow the Birds to Vacation Land, Wisconsin' is the increased number of non-resi-

to Vacation Land, Wisconsin' is the increased number of non-resident fishing licenses taken out up to July 4. In 1935 a total of 20,655 were taken out up to that date. This year 30,848 were taken out, or an increase of 49 percent.

"During the week immediately preceding the national holiday in 1935, 2,756 non-resident fishing licenses were issued. During the same period this year, 6,840 were issued—an increase of more than 148 percent! This increase in licenses to non-resident anglers is regarded as the most convincing proof that the out-of-state business is greatly on the increase this year."

All indications point to a banner tourist year for Wisconsin with new vacation guests attracted to swell the ranks of tourists who will leave many times the amount of the \$50,000 appropriation within the borders of the state to the direct or indirect financial advantage of every Wisconsin resident.



State Roadside Park Scenes—(Top) Picturesque Rock Formations at Rocky Arbor; (Center) An ideal picnic spot at Ojibwa; (Lower) Camping and picnic grounds at New Glarus Woods.

# **PUBLIC RELATIONS**

Wisconsin has reached a new high point of public interest in conservation with a resulting enormous demand for information on conservation subjects.

With a staff of one, the public relations division of the department has attempted to meet information demands as far as possible, using every available facility.

Chief activities of the division have been:

- 1. Compiling and printing of routine booklets, such as the annual publications on fish and game laws.
- Compiling and printing of the monthly bulletin and special pamphlets.
- 3. Cooperation with state organizations working in the interest of conservation.
- 4. Newspaper services.
- Field contacts.

In the past year the department has issued more literature than the total of many previous years. The supply of printed information, however, is still entirely inadequate to meet demands of people who look to their state for help in their own efforts to advance conservation projects.

In an effort to cover as much ground as possible with its limited facilities, the public relations division has placed most stress on wholesale information channels rather than on personal contacts.

#### **PUBLICATIONS**

The monthly bulletin was started in February, 1929, and has been issued every month since that time, recently evolving from a mimeographed to a printed publication. Emphasis at first was laid on summaries of arrests for law violations, but of late has developed into an informational service dealing with conservation activities. The bulletin was an answer to a specific demand from conservation groups, members of the department's field force, and others. Its circulation at present is about 2,600 a month.

Following the last legislative session, a new edition of Wisconsin Conservation Laws was compiled and published. Separate booklets on hunting and trapping laws and on fishing laws are annually made available to the sporting public. A new edition of "Forest, Field and Marsh Fire Laws" was printed during the biennium, and a revised issue of "Forest Trees of Wisconsin" was released. A guidebook for the state experimental game and fur farm, setting forth accomplish-

ments and future plans and including brief life histories of the birds and animals at the farm, was published.

In answer to a widespread demand for a general sketch of the entire conservation field, the department in the spring of 1936 compiled and printed a "Conservation Outline of Wisconsin". A total of fifteen thousand of these booklets was distributed throughout the state.

Through the courtesy of the Milwaukee Journal, pictures of principal game fishes were made available for the pamphlet on fishing laws. The division believes that Wisconsin fish should be presented in natural colors. Pictures in color would have a decided educational value and would be of extreme importance from the standpoint of state advertising because no state now possesses colored pictures of its fish inhabitants.

The state also needs an extensive collection of reproduceable pictures of its wildlife, both in black and white and full color.

There are hundreds of organizations of men and women in the state working to advance conservation. The division is interested in bringing these groups together to add more force to their efforts. Considerable time has been spent in aiding various groups interested in a unified campaign. The monthly bulletin is cited by a number of groups as an aid in this direction.

### **NEWS SERVICES**

The division has conducted two separate news services—one prepared in column form for weeklies and one for daily releases issued from time to time. As far as possible the division has also supplied requested articles and information for individual publications.

About forty thousand men are now enrolled in state sportsmen's clubs, while women's groups with a special interest in conservation have thousands of members. The public relations division was asked to help in publicizing the 1936 Conservation Week, and an initial program was worked out for their use. Another program of wider scope is now planned for the future.

Advancement of conservation rests largely on the efforts of citizen groups willing to give their time and money to the cause. The public relations division believes it could greatly extend its value if time permitted more contacts with these groups to offer aid and information available through the Conservation Department.

# **FINANCE**

Upon the finance division rests the responsibility for the proper functioning of the entire Conservation Department.

More than a million dollars of public funds, ranging in amounts of a few cents to thousands of dollars, annually pass through the machinery of this division for payrolls, expense vouchers, and purchases of all kinds. All vouchers are audited and passed to the Secretary of State for payment. A monthly financial statement is furnished to the Director, Commissioners, and to each Division Chief showing the expenditures of each division for the current month, the cumulative total, and the unexpended balance. A monthly comparison of income is also supplied comparing the receipts for the current month as well as a cumulative total with the like period of the preceding year.

The preparation of the departmental and division budgets is an important function of the finance division. The income during the past two years has not increased in comparison with the expansion of the departmental activities, thereby making the duties of the finance division exceedingly difficult in attempting to balance the budget.

The conservation fund is comprised of the monies received from fishing, hunting, trapping licenses, etc., and although these receipts have been growing each year, the increase does not cover the development of the conservation activities.

The forestry program of the state is supported by one-tenth of one mill of the state tax levy. Since this forestry tax levy has been put into effect, the assessed valuation of state property has decreased, while forestry expenditures have increased, with the result that financing this division has become an acute problem.

The removal of detrimental fish from Wisconsin's waters was financed by a direct appropriation of \$150,000 from the general fund.

An annual appropriation of \$50,000 was made by the legislature to the Conservation Commission on July 1, 1935 to carry on a recreational publicity program. The benefit resulting from this program is evident, even though the appropriation is inadequate for the purpose.

One hundred and fifty thousand dollars is appropriated annually to the Conservation Commission from the state general fund to carry out the provisions of the forest crop law.



During the severe winter months of 1936 many deer in overpopulated areas were trapped and transported under the supervision of the law enforcement division of the Conservation Department to more suitable feeding grounds.

# STENOGRAPHIC AND CLERICAL

One of the divisions of which the public knows very little and without which none of the other divisions of the department would be able to function efficiently is the stenographic and clerical. Because of the nature of its varied duties, many of its operations are closely related to every branch of the conservation service. This division is composed of seven sections—namely, information, license and confiscation, claim and permit, mail and supply, filing, photographic, and the section of stenographers and clerks.

#### INFORMATION

It is the duty of the information section to serve as the departmental "receptionist", greeting the public, providing them with such information as they may request, and directing them to the various division chiefs or other personnel with whom they have business. This section also provides similar information by correspondence, pamphlets, periodicals, or whatever may be necessary to meet the demands or the requests of the inquiring public.

# LICENSE AND CONFISCATION

The license and confiscation section is responsible for the issuance and distribution of the many varieties of licenses that are distributed and sold by the department, either direct, or through the county clerks, or other authorized agents. Statutory provisions require that resident hunting licenses and deer tags shall be issued by county clerks or their legally appointed deputies. Fishing licenses—such as non-resident, resident rod and reel, and non-resident fish shipping coupons—shall be issued by county clerks, their deputies, or authorized departmental agencies.

Ten percent commission on all the sales of non-resident, rod and reel fishing licenses, and fish shipping coupons issued by county clerks or their deputies is allowed. No commission is given other agents of the Conservation Department for the sale of resident rod and reel licenses, but ten percent is allowed for the sale of non-resident licenses and non-resident fish shipping coupons. A saving of \$12,000 has been made by the department during the past two years on rod and reel fishing licenses sold through the department itself and its agents.

Because the old method of license sales did not function with the proper degree of efficiency and the revenues received indicated that licenses were not being purchased in accordance with the number of people using our inland waters for fishing purposes, a change in the distribution and sales system of such licenses was made during the past biennium. The number of sales depots was increased from 784 to 2,247, and agents were provided such licenses on a credit basis instead of being compelled to pay for them in advance. Depots were established in convenient locations so that fishermen could secure such licenses at practically any time of day or night. Better results in connection with license sales were immediately discernible, for during the year 1935 fishing license sales increased \$43,470.10 over 1934, and the 1936 season up to December 31, with some accounts still outstanding, shows a still further increase of \$72,282.36 over the preceding year.

Confiscated articles, such as guns, fishing tackle, furs, etc., are sold by the license and confiscation section after they have been appraised as to value by competent personnel in charge. Accurate records of the sales of the various licenses, confiscated articles, inventory of departmental equipment, etc., are maintained at all times,

#### CLAIM AND PERMIT

Licenses requiring detailed land descriptions in accordance with statutory provision, such as deer, game, and fur farms, shooting preserves, and private fish hatcheries, are issued by the claim and permit section because of the specialized nature of the work in connection with securing the proper descriptions, etc. This section also handles all permits, state property leases, claims for bounty, deer, beaver damage, injury to departmental personnel in cooperation with the Industrial Commission, and contracts for inland waters commercial fishing.

## MAIL AND SUPPLY

The mail and supply section is responsible for the distribution and prompt delivery of all mail received by the department, and for the efficient distribution of material requested by field personnel, or to be forwarded to individuals desiring information. This section is also custodian of supplies, keeping a careful inventory at all times so that reordering can be effected promptly when necessary.

#### FILING

The filing section is responsible for departmental files and must classify all correspondence and other data for ready availability in the event they are required for any purpose. This section is likewise responsible for the proper maintenance of the departmental library.

# **PHOTOGRAPHIC**

During the past biennium the motion picture section of the department has been reorganized, and developed into a more efficient service resulting in four times the number of showings furnished in any previous years. All of the old subjects have been re-edited and many new reels have been added to the library depicting conservation activities and the recreational attractiveness of Wisconsin. These subjects are in constant circulation throughout schools, sportsmen's organizations, etc. of this state and other states.

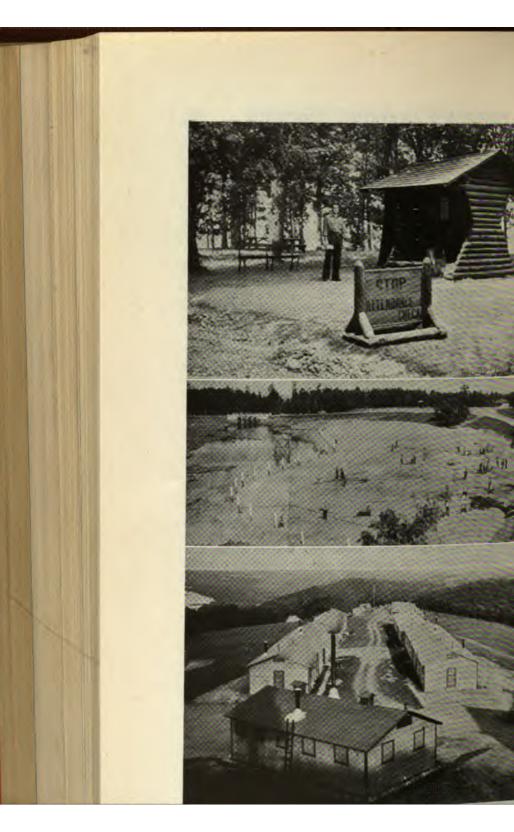
The records indicate that the most popular films have been "Wisconsin's Whitetail Deer", "Bear Facts", and "Amik—The Beaver" all of them averaging four hundred showings. Among the new pictures which are being arranged is a forest protection picture, a colored film on the state's wild flowers and mushrooms, the propagation of game birds, and a colored reel on Wisconsin's scenic attractions. These should be available for distribution within the next few months. Both 16 mm. and 35 mm. films may be secured, and the only cost to the recipient is transportation charges both ways.

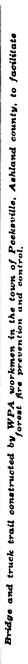
Last year's four sets of lantern slides have been increased to nine, with accompanying lectures. Records of speeches delivered by department representatives are maintained in this section and show a total of 616 during the past year, 57 of them being radio talks.

The filing system for still photographs has been altered and completed, and there are now on file about five thousand pictures on conservation subjects and scenic views about the state. Newspapers, periodicals, and state publications utilize these photographs, without charge. The only stipulation in connection with the use of the pictures is the departmental credit line under each reproduction printed.

# STENOGRAPHERS AND CLERKS

The stenographers and typists are responsible for the typing, and the dictation with its transcription that they receive from the departmental personnel. The clerks are accountable for departmental records and bookkeeping operations.







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### WORKS PROGRESS ADMINISTRATION

Extraordinary advancement in conservation in Wisconsin resulted from the fund of approximately \$2,045,703 contributed by the Works Progress Administration between September, 1935 and June 15, 1936. These monies were expended largely under the direction of the Conservation Commission to further long-planned developments.

On June 30, 1936 a total of 3,421 WPA workers were augmenting regular conservation crews, advancing the state program in the fields of water conservation, fish hatchery repair and improvement, lake and stream improvement, forest protection and management, fur and game farm work, and state park improvement. Much of the money spent by WPA on conservation was in the nature of capital investment.

The WPA program provided that the initiative for the inauguration of all projects should come from state, county, and local officials familiar with the developmental needs of the state. WPA rehabilitation projects included building dams to restore disappearing lakes; making lakes and streams better habitats for game fish; clearing brush and slash from thousands of acres of forest crop land; and the building of ranger stations, opening up miles of fire lanes and truck trails and stringing new telephone lines.

With the exception of work in the field of water conservation, which was sponsored by local units of government, all of the WPA conservation activity was part of a statewide program under the direction of the State Conservation Commission. On June 30 a total of 113 individual projects was operating under the supervision of department experts. Nineteen projects had been completed, and 53 others which had been started were temporarily discontinued. For work in this division of conservation activity, the WPA had expended \$1,547,154, while the Conservation Commission had contributed \$163,961. Of the 2,720 WPA workers employed on this part of the program, more than 90 percent were taken from relief rolls and were given an average wage of \$45.94 a month.

### LAKE RESTORATION

The revival of some of northern Wisconsin's dying lakes is one of the important undertakings of WPA in the field of conservation. These restorations are important not only from a recreational standpoint but also to serve as a fundamental purpose of water control and the maintenance of ground water levels. In many cases restoration of water levels means a reinstatement of taxable land values.

The Conservation Commission was instrumental in developing plans for lake and stream restorations in cooperation with the state hydraulic division of WPA and county planning committees.

Funds were allotted for 14 dams, some of which were designed to replace old logging dams, others to be built at the outlet of lakes to restore and control water levels, and one to divert flood waters from the Totogatic River to several receding lakes in the vicinity. Each dam will not only restore one particular lake, but in many instances chains of lakes will be affected. On June 30 one of the dams was completed and work proceeded on 11 others.

The first dam to be completed, located on Slim River in Washburn county, has restored a logging lake which had completely disappeared when the lumberman's dam washed out. The project has added 21,000 feet of new lake frontage and has increased the valuation of the land around this lake by at least \$15,000. A second dam, which was practically completed except for additional rip-rapping and backfilling, is on the St. Croix River in Douglas county. On June 30 water held back by this dam had already reached the halfway level over the entire flowage area of nearly 3,200 acres. When the water rises to its full height, it will create a beautiful lake more than seven miles long and dotted with 17 wooded islands. This lake, together with stretches of the St. Croix River made navigable by the dam, will furnish 15 miles of boating in ideal vacation country.

Other dams, which were at least 90 percent complete on June 30, are the Clam Lake dam on the Clam River in Burnett county with a flowage of 1,725 acres; the Little Rice on the Wolf River in Forest county, which has a flowage of 2,050 acres; the Billy Boy on the Court O'Reilles River in Sawyer county, where an 845-acre lake is being restored; and the Shay on the Turtle River in Iron county, where a flowage of 1,140 acres is being flooded.

On the Lake Nancy dam in Washburn county—the first project undertaken in Wisconsin under the recent legislation permitting diversion of water from one water course to another—WPA workmen had constructed one section of the coffer dam and were pouring concrete for the permanent structure. By means of a channel from the dam, flood waters of the Totogatic will be turned through the three Kimball lakes and into Lake Nancy, which has fallen six feet from its normal height, and will maintain water levels in this drought stricken chain. Seepage from the larger bodies of water will help to raise the level of two smaller lakes not directly connected in this water course. In addition to the effect on the six lakes, flowage created by the dam will form an entirely new lake about 1,700 acres in area. From Lake Nancy the water will flow through another channel back into the Totogatic, several miles below the point where it was originally diverted from its course.

Farther east on the same river, in Sawyer county, work on a dam, which will create the largest entirely new lake in the program, was 35 percent complete on June 30. Water from twelve to sixteen feet deep will cover the flowage area of 2,800 acres, creating a new lake

frontage of approximately one hundred seventy thousand feet. At a conservative estimated value for lake frontage of 75 cents per front foot, land that is now tax delinquent will have an estimated valuation of \$127,500. A tax income of as high as \$6,400 per year from this land has been predicted for Sawyer county.

Other northern Wisconsin lake restoration dams include the Musser in Price county, which was 85 percent complete; the Prentice in the same county, 80 percent complete; the Eau Claire in Eau Claire county, 50 percent complete; and the Minerva in Burnett, 60 percent complete.

Four smaller dams also being constructed create recreational lakes in park areas in communities farther south in the state. They are located at Kewaskum in Washington county; Colfax in Dunn county; Four Mile creek in Juneau county; and the Yellow River in Juneau county. WPA expenditures for these four projects totaled \$71,668 of which the sponsors contributed \$9,586.

When all of the new and restored lakes are flooded, the Conservation Commission plans to stock them with game fish supplied by the state hatcheries.

### DRAINAGE WORK

In central Wisconsin another phase of the WPA draining control activity will restore nearly three hundred thousand acres of semi-desert wasteland to economic productivity. By building 32 drainage control dams, the WPA has completed a program begun by a previous governmental agency to rebuild an area brought to desolation by unwise land utilization. More than 85 percent of the land in some drainage districts reverted to county governments through delinquent tax sales.

By building dams in these ditches, the disastrous drainage they induced is being checked and controlled. A total of 240 has been completed on the WPA and the previous work relief program of the WERA. Because the dams are two feet higher than the level of the land, it will be possible to flood the surrounding country in case peat fires occur. In cranberry districts the dams will store water which can be used by growers to flood marshes and protect their crops from frosts. Some of the others are designed merely to maintain the ground water levels high enough to make agriculture again profitable on the fringes of the marshland. Still others have been constructed so that areas above them can be flooded, thereby making ponds to form nesting refuges for wild game birds.

WPA expenditures for labor and materials used in constructing these dams totaled \$105,432, of which \$939 was contributed by local sponsors. This investment will bring tangible returns in the form of income from cranberry, fur, and moss gathering industries which will supplant submarginal agriculture in most of the region. An abundance of wild game and fish will make this section of the state attractive to hunters, fishermen, and tourists. When the ground water level

rises, agriculture on the better soil and the edges of the marsh will again become profitable, and as a result thousands of acres will be economically productive.

### STREAM IMPROVEMENT PROGRAM

Work on the WPA lake and stream improvement program is designed to restore some of the natural conditions favorable to fish life. During the winter WPA workmen constructed brush refuges and alder tangles from brush and saplings, weighted them down with boulders and sand bags, and sunk them through holes cut in the ice. They will provide shelters where small fry can escape from larger fish. The structures also promote insect life necessary for fish food. Bass spawning boxes and radial minnow spawners were constructed and placed in numerous lakes. Approximately twenty-five thousand of these structures were introduced into more than one hundred lakes during the winter, and nearly 1,500 men were given employment on this program.

Stream improvement projects were revived in the spring as the lake improvement work was completed, and on June 30 were carried on in twenty counties of the state. To speed up the flow of water in sluggish streams, WPA workmen are building wing dams and stream deflectors which are placed at the proper angle with the current. Faster water means deeper streams, less silt, and more exposed gravel where trout can lay their eggs. It also means the elimination of warm, stagnant ponds. As a result the water will be cooled as much as ten degrees, making it more inviting to trout and fishermen alike. Other types of stream improvement include building bank covers to provide shade and protection, and planting river banks with trees and shrubs to restore, insofar as possible, the natural stream cover.

### FOREST PROTECTION AID

In the field of forest protection, 59 WPA projects were operating on June 30. Building ranger stations and garages, repairing telephone wires and stringing new lines, clearing fire breaks and fire lanes, and constructing truck trails are included in the work done. In the field of fire prevention WPA workmen have completed more than five thousand acres of slash disposal, brush and snag removal, and general fire hazard reduction work. They have also completed nearly three hundred miles of roadside clearing, truck trail repair, and construction.

A total of 22 new ranger stations and four additional combination warehouses and garages has been built. Two of the stations are district ranger headquarters, with residence for rangers. Twenty of them combine offices, five-stall garages, and storage room for smaller equipment in attractive story and a half buildings constructed of concrete blocks or stone. The four garage and warehouse buildings each

have a six-stall garage and a second floor for storage. One ranger station, located at Lake Tomahawk in Oneida county, and two garages and warehouses were completed on June 30. Nine other stations and remaining two warehouses were more than 70 percent complete.

Approximately one hundred and seventy miles of outmoded iron wire have been replaced with new copper lines in the Conservation Department's telephone system. In addition 58 miles of new lines have been built in this communication network. WPA workmen have also cleared 373 miles of telephone routes of brush and trees which eventually would interfere with the operation of the system.

Construction of an airplane hangar has been started as another WPA project at Tomahawk, the state forest protection headquarters.

### FOREST MANAGEMENT PROJECTS

Five projects in the field of forest management—including forest stand improvement, silviculture treatment, and surveys for the planting of shelterbelts and windbreaks—were operating on June 30. Two other shelterbelt projects have been completed. Three surveys were made in light soil counties—Adams, Waupaca, and Wood—where dust storms wrought great damage. Under the supervision of a state forester WPA workmen surveyed farms in the most severely affected regions and worked out plans with the farmers for the planting of shelterbelts or windbreaks which will help check wind erosion. Maps showing the prospective location of the shelterbelts, the kind of soil, and the most desirable type of trees to be used have been prepared. Farmers will obtain trees for planting from the state nurseries.

### OTHER COOPERATIVE MEASURES

The Conservation Commission sponsored WPA projects to also improve facilities at the state fish hatcheries. A total of 21 projects was undertaken at the hatcheries, including repair and improvement of hatchery buildings, construction of new buildings, construction of bass rearing ponds, and improvement of the water supply.

Much of the building work of a long-time program at the State Experimental Game and Fur Farm, Poynette, has been completed with WPA labor. The work included building of electric brooders, a large dining and lecture hall, a cold storage and slaughter house, a barn, and numerous pens and cages.

Additional facilities are being provided at the Conservation Department law enforcement headquarters at Oshkosh. A new storage and boat house, four patrol boats, and new docks and hoists have been constructed, and other buildings have been painted and repaired.

Work has also been carried on at Terry Andrae, Tower Hill, and Ojibwa State Parks.





Construction of a new raceway on a WPA project at the fish hatchery at Salmo, Bayfield county, will increase the capacity of the hatchery for game fish rearing.



WPA workmen are using lumber obtained from dead or undesirable trees to construct bass spawning boxes on a WPA lake and stream improvement program in Dunn county.

### WISCONSIN EMERGENCY CONSERVATION WORK (ECW)

### CIVILIAN CONSERVATION CORPS (CCC)

In cooperation with the U. S. Forest Service, Department of Agriculture, the Conservation Department has carried on the operation of CCC camps during the past biennium. These camps serve as a work agency for the Conservation Department on all phases of forest protection and improvement.

At their maximum strength, 24 camps with an average of two hundred men per camp were operated. The work done was primarily concerned with the betterment of state and county forest land and the installation of most urgent forest protection facilities. During 1936 the number of these state operated forest camps was reduced to 19, with an average strength of 150 men. It is hoped that these camps may continue in operation for many years as practically an unlimited amount of work is left to be done in the field of conservation.

The aim of the Conservation Department in connection with the operation of the CCC camps has been to develop a well rounded program. While the primary emphasis has been placed on forest protection and forest improvements, the work of these camps has also been concerned with lake and stream improvement, game management, the development of recreational resources, the eradication of dangerous tree diseases, and similar activities. Conservation work has been advanced many years by the presence of these camps and the important work that they have accomplished in every part of the state.

### AID IN FIRE SUPPRESSION

The aid of the CCC camps in forest fire suppression during the drought summer months of 1936 is especially noteworthy. It is certain that if it were not for the interest and quick response of these trained crews of fire fighters from the strategically located CCC camps, the burned-over area and the expense of fire suppression would have been much greater. The work of the enrollees as fire fighters saved the state many thousands of dollars. The experience of the Conservation Department with the CCC camps has led to the definite conclusion that the department cannot go back again to its dependence on volunteer fire fighting crews as it did for many years, but from now on the organized crews that these camps have and can furnish must be available if satisfactory results in fire suppression are to be attained. On this account, if for no other, the department notes with

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favor the present proposals before Congress to make the CCC camp activity a permanent feature of the Federal Forest Service.

In order to place emphasis on the operation of these CCC forest camps, a reorganization of procedure was effected in 1935. With the financial assistance of the Antigo city council, an office was opened in that city, and now all details are handled from that point. This change brings the office in closer contact with its field force, and as most of the CCC camps are located in the northern counties of Wisconsin, the ECW organization has operated to a greater degree of efficiency than was the case when the headquarters were located in Madison.

In all other respects the CCC camps under the Conservation Department have been operated during the past biennium with due regard to the primary purposes for which they were originally established—namely:

The rehabilitation of young men; The performance of useful work.

As an indication of the work completed during the past two years, attention is directed to the summary appearing on pages 197, 198, and 199 of the statistical section of this report.



Dam built by WPA in a drainage ditch in Wood county. More than 30 dams of this type have been placed in drainage ditches in this Central Wisconsin area to check the uncontrolled drainage which has lowered the ground moisture level until the surrounding country has become virtual desert.

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### NATIONAL PARK SERVICE

CCC CAMP ACTIVITIES (STATE PARKS)

Only one CCC camp, that at Nelson Dewey Park, existed in a state park prior to June 30, 1935. Since that time, however, an extensive improvement program has been carried out in the state park system with the aid of the National Park Service.

Since the establishment of the Emergency Conservation Work program in 1933, from four to six camps have been in operation in Milwaukee county parks, engaging in park improvement, flood control work, and lakeshore protection work. In Kenosha county a camp has worked on Fox River Park, near Silver lake, since August, 1934.

During 1935 nine state park camps, including the University Arboretum, were opened. One camp was built in June; five in July and August, and three in November. A procurement office for the purpose of making necessary purchases for these camps was established at Madison in quarters furnished by the Conservation Department.

All personnel in the camps and in the procurement and design offices were employed by the National Park Service under ECW. In January, 1936 the procurement office was combined with the office in Milwaukee, which had been operating since 1933.

### CONSTRUCTION PROGRAM

Since in most cases there were no adequate topographic surveys nor comprehensive layout plans prepared for the state parks prior to opening the camps, no structures of consequence could be undertaken for some time. Necessary construction plans for buildings for all parks had to be drawn with a limited staff. It was necessary to study the parks individually—their area; approaches; scenic, scientific, historical, wildlife, and recreational possibilities; and existing facilites for public use and their probable future use.

The first requisite in park layout is to locate and develop a single area, if possible, in which to concentrate traffic. This area is to be reached by the shortest possible road through the park from a highway.

The Park Service contends that so-called scenic drives through parks are destructive to natural beauty; costly to build and maintain; and that they defeat the primary state park objective of bringing people into real contact with nature conditions.

Closely adjacent to a main parking area, picnic and camping grounds and recreational features are planned. The relationship of these areas varies according to the physical geography of the park. Trails leading to important scenic spots are established, as well as trails taking the real nature lover into more remote woodland areas. Forest cleanup is not undertaken, because it destroys the habitat of many birds, animals, and plant species.

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Raccoon pens built by WPA labor at the State Experimental Game and Fur Farm at Poynette. Black raccoon are raised on the farm for liberation throughout the state.

### IMPROVEMENT OF PARK FACILITIES

Of primary importance in any park are water supply and sanitary facilities. Construction plans have been centered on utilities and buildings, and for most parks sufficient plans are now available to produce notable structural improvements.

Bridges, guard rails, fireplaces, picnic tables and benches, ravine dams and other erosion control devices, parking areas, and similar projects were included in the work at most of the parks.

An extensive trail system has been established in Nelson Dewey State Park.

A large combination shelter and concession building was scheduled for Copper Falls State Park.

Trails, a ski slide, lookout tower, and extensive general improvements have been accomplished at Peninsula State Park.

Extensive general improvements have been made at Pattison State Park.

A large stone and timber bathhouse was well along in construction at the north end of Devils Lake at an estimated cost of \$20,000.

An extensive trail system and opening of several unique potholes are outstanding accomplishments at Interstate Park.

A new trailside shelter with fireplace has been built of native materials on Rib Mountain.

An outstanding trail system is under construction at Perrot State Park.

### RESETTLEMENT ADMINISTRATION

In the summer of 1934 the Land Use Adjustment program, which is now known as the Resettlement Administration program, had its origin under the Land Policy section of the AAA. For the first year, or until July 1, 1935, this program was primarily concerned with the purchase of submarginal land and the human problems incidental to the welfare of the economically underprivileged settler. On July 1, 1935 when the Resettlement Administration assumed this program, preliminary acquisition work was well under way on ten projects in Wisconsin. Three of these projects are closely grouped in the cut-over lands of northern Wisconsin. Four of the conservation project areas are located in the south central Wisconsin drainage basin. The remaining three, which are concerned with providing adequate habitat for Indian populations, are located in existing Indian reservations in northern Wisconsin.

Northern Wisconsin settler relocation projects overlap to a considerable extent existing federal, state, and county forests. The contribution made by the Resettlement Administration to conservation on these projects consists largely in consolidating under unified administrative control the scattered land parcels representing holdings of private settlers which federal and state forest administration have not been in a position to acquire. The following table shows that by the purchase of 29,033 acres the Resettlement Administration would block out for federal, state, and county administrations an area totaling 2,274,639 acres.

Project purchase area	2,274,639	acres
U. S. Forest Service	659.848	acres
State Forest	91,273	acres
Indian Lands	12,999	acres
County Forest	221,961	acres
Purchase recommended	29,033	acres
Accepted options	26,402	acres
Acreage acquired	1.567	acres

Progress made in land acquisition on the two central Wisconsin game projects, Necedah and Black River Falls, is shown as follows:

Acreage in project purchase area	152.996
Recommended for purchase	150.170
Under accepted options	147,264
Acreage acquired	9.562

The amount of work involved in searching and clearing title on these lands in order that they be acceptable for final governmental purchase causes unavoidable delay. It is anticipated that this acquisition will not be fully completed before July, 1937.

### DEVELOPMENTAL PROGRAM

The development program on these projects, which was begun in the fall of 1935, is about one-third completed. Among the more important developmental operations are: 15 concrete impounding dams; 13 miles of dyke; 2,654 acres of forest stand improvement, leaving brush piles for game; 21 miles of trout streams permanently improved; 44 miles of firebreaks constructed; 40 miles of truck trails improved; installation of a skeleton food patch system; and an emergency winter feeding system that can be expanded at any later date to meet demands of increasing game populations.

On the Camp McCoy project the primary objective of the Resettlement Administration has been to bring about a land use adjustment involving purchase of the submarginal farms in the vicinity of the present military reservation and subsequent assistance to the settlers in relocating elsewhere on more productive land. The area thus depopulated is contiguous with the present artillery range on Camp McCoy and is chiefly needed to increase this range and reduce the hazard from army artillery maneuvers. Land acquisition progress is shown as follows:

Acres in project purchase area	13,460
Recommended for purchase	11.000
Under accepted options	9.501
Acquired	
110401-00	

The developmental program on the Camp McCoy project has been guided along lines most valuable to the army for their special needs and uses. Conservation of natural resources, however, is receiving increasing emphasis from the army on lands they control. It has been the objective of the Resettlement Administration to do for conservation on Camp McCoy everything that can be done consistent with the special military uses involved. The project means conservation of natural resources on forty thousand acres.

The project development is about 41 percent complete. The following operations have been undertaken:

Park roads 9 Firebreaks 22	
Reforestation10	
Trout stream improvement 3	miles
Game shelter and winter feeding program.	

The Mill Bluff Roadside Park project is a small tract of land adjacent to the main highways in central Wisconsin near Tomah. The project purchase area of 51.42 acres is under accepted option. It is a scenic spot with naturally occurring geologic features characteristic of the region. A tourist shelter is under construction at the present time, and other facilities for the convenience of campers and picnickers are planned. A small pond is located on the project to which it may be possible to attract shorebirds and immigrant waterfowl for educational purposes. Development of the project is about 50 percent completed.

The Bad River, Lac Court Oreilles, and Stockbridge Indian projects are all located on existing Indian reservations in northern Wisconsin. The objective here is to purchase and restore area lands to the reservation which have passed from their jurisdiction, and in some cases to increase the size of the reservations by the purchase of new land. Although no development of these lands is contemplated, the projects are considered to be a very worthwhile contribution to conservation in Wisconsin. The present status of the acquisition program of these projects is as follows:

Project purchase area2	12.355	acres
Recommended for purchase	49,364	acres
Accepted options	47,608	acres
Acquired		acres

The provision of adequate reservation facilities for these Indians will, it is hoped, materially simplify the administration of neighboring conservation areas.



Ranger station and garage built by the WPA at Conover in Vilas county. It is one of 21 similar buildings under construction by the WPA in forest protection districts to provide convenient office head-quarters for forest rangers and adequate storage space for tools, trucks, and fire-fighting equipment.

### STATISTICAL REPORTS

### FINANCIAL STATEMENT

### of the

### WISCONSIN CONSERVATION DEPARTMENT 1934–1935

### FISH AND GAME CONSERVATION

### Disbursements

General Administration	\$ 1,921.27 22,910.50	\$ 50,280.38 24,881.77
Law Enforcement	\$ 24,831.77 \$184,257.12 25,019.17	209,276.29
Fisheries Fisheries Administration Fish hatchery operation Distribution of fish Collection of fish spawn Research	117,499.59 6,679.04 11,541.78	152,627.63
Commercial Fishing Mississippi River rough fishing Inland contract rough fishing	\$152,627.68 \$ 17,626.07 8,216.45	25,842.52
Game Game Administration Game census reports Game refuges Game farms—operation Beaver control Winter feeding	7,994.95 568.82 4,908.43 5671.81 6,046.98	70,705.81
Fur. Miscellaneous Printing and Tags. Deer damage claims. State Board of Deposit Refunds of receipts. Horicon Marsh Restoration Chicago outdoor show. Construction sidewalk Sheboygan hatchery.		\$ 80,804.48 1,905.95 5,746.14 7,619.04 8,772.95 18,917.50 748.29 165.09

# |RECTION: Should be 1935-36

### FISH AND GAME CONSERVATION—Continued

### Receipts

Nonresident fishing licenses Fish shipping coupons	_ `		482 505		
Resident rod and reel fishing licenses	. 10		204		
Nonresident hunting licenses	_	8,	100	.00	1
Resident hunting licenses.	_ 20	01,0	024	.27	1
Settlers hunting licenses			170		
Duplicate licenses	-	4	444	. 50	1
Deer tags	. 8		547		
Trapping licenses			498		
Trap tags			663		
Confiscations			967		
Wardens fees			880		
Clamming licenses			740		
Set line licenses	-		815		
Guide licenses	-		684		
Fish dealer licenses	-		050		
Great lakes fishing licenses			425		
Mississippi River fishing licenses.	- ,		844		
Rough fish	- 1		590		
Decoy bands	-		540 685		
Nursery	-		080 790		
Deer, game and tur farm licenses	-		025		
Taxidermist licenses	-		205		
Fur dealer licenses Xmas tree dealer licenses	-		200 154		
Beaver trapping licenses and tags	-		918		
Sturgeon tags	-		178		
Interest on bank deposits	-		958		
Miscellaneous	-		518		
MAINTENNET CHEST CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTR	_				_

\$672,061.84

### PARK RECREATION

### Disbursements

Maintenance of golf course (Peninsula Park)	5,657.88

### Receipts

Green foor golf course (Poningula Park)	<b>₹ 4 995 4</b> 5

### REMOVAL ROUGH FISH-STATE OPERATION

### Disbursements

Removal rough fish	\$ 88,072.11
Total	\$ 33,072.11

### Receipts

Sale of rough fish\$	11.275.88
Appropriation \$150,000.00 (Released by Emergency Board)	50,000.00
m	61 07E 00

### RECREATIONAL PUBLICITY

RECREATION AD 1 OBJECT 1
Disbursements
Recreational publicity \$46,044.10
Receipts
Appropriation\$ 50,000.00
FOREST CROP
Disbursements
Administration
Total\$148,118.35
Receipts
Appropriation\$150,000.00
Total\$150,000.00
BOUNTIES
Disbursements
Bounties paid
Receipts
Sum sufficient from general fund

### FORESTRY CONSERVATION

Disbursements	
Administration	\$ 17 268 95
Protection	
Forest fire wardens	15.578.49
Curest life wardens	10,010.49
Suppression	18,382.71
Nursery	
State Forests	14,879.28
County Forestry Aid	133,038.25
Public relations.	8 <b>,348</b> .50
Co-operative forestry	2.170.84
Beaver control	
Horicon fire prevention	5.429.64
Miscellaneous	18,298.42
Total	\$606,228,67
Receipts	
1/10 mill forestry tax	\$418,854.65
Fire suppression charges	114,198.44
Clarke-McNary receipts	70,686.14

### PARK LANDS

Disbursements	
Park operation \$7,488	.86
Receipts           Park receipts         \$ 6,680	.62
PARK RECREATION	
Disbursements	
Maintenance golf course (Peninsula Park)\$ 5,866	. 18
Receipts	
Green fees golf course (Peninsula Park)	. 58
FOREST CROP	
Disbursements	
Administration         \$ 14,988           Payment to towns         1,992	.25
Total	
Receipts	
That part of appropriation available to Conservation Commission\$ 16,976	
Total \$ 16,976	.14
BOUNTIES	
Disbursements	
Bounties paid	0.00
Receipts	
Sum sufficient from general fund\$ 41,050	0.00

### FINANCIAL STATEMENT

### of the

### WISCONSIN CONSERVATION DEPARTMENT 1935–1936

### FISH AND GAME CONSERVATION

### Disbursements

	-	
General Administration		\$ 51.887.18
Finance and Accounts		6.012.81
Parks		25.965.88
Park Administration		20,500.00
Park operation	# &,&41.06 00 700 E1	
Park operation	28,720.51	
	2 25 225 22	
	\$ 25,965.83	
Law Enforcement		205,744.29
Permanent Cons. Wardens	\$187,344.10	
Seasonal Cons. Wardens	18,400.19	
	\$205,744.29	
Fisheries		170.878.48
Fisheries Administration	\$ 14 200 RQ	210,01010
Fish hatchery operation	199 700 66	
Distribution of fish	4.841.96	
Collection of Schoners	20,952.20	
Collection of fish spawn	20,952.20	
Research	2,665.18	
Supervision—outlying commercial fishermen	8,885.22	
Stream Improvement	2,083.42	
	\$170,878.48	
Commercial Fishing		80,975.24
Mississippi River rough fishing	\$ 21.447.57	•
Inland contract rough fishing	9.527.67	
	\$ 80,975.24	
Game	¥ 00,010.22	67.810.63
Game administration		01,010.00
Game census reports	924.00	
Game refuges	4,787.68	
Game farms—operation		
Beaver control	5,680.57	
Winter feeding	8,615.87	
	\$ 67,810.68	
_		
Fur.		\$ 36,724.50
Miscellaneous Printing and Tags		11,828.21
Deer Damage Claims		5,040.09
Unemployment Insurance		2,827.02
State Board of Deposit		10.567.59
Refunds of Receipts		5.504.83
Horicon Marsh Restoration		104.41
ALVIIVU MARIDU ATURVIRWUU,		104.41
Total		<b>\$68</b> 0.870.61

### FISH AND GAME CONSERVATION—Continued

### Receipts

Nonresident fish shipping coupons Resident rod and reel fishing licenses Nonresident hunting licenses Resident hunting licenses Settlers hunting licenses Duplicate licenses Duplicate licenses Trapping licenses Trapping licenses Trap tags Confiscations Warden fees Clamming licenses Set line licenses Guide licenses Gride licenses Gride licenses Gride licenses Gride licenses Gride licenses Gride licenses Gride licenses Gride licenses	115,804.91 8,425.00 180,705.38 97.00 387.05 1,840.00 7,421.80 6,728.26 8,697.94 138.7.40 1,862.97 662.00 2,400.00 4,580.75 1,990.00
Warden fees	. 188.74
Clamming licenses	
Guide licenses	
Mississippi River fishing licenses	
Rough fish	
Decoy bands	
Nursery	
Deer, game and fur farm licenses	
Taxidermist licenses	660.00
Fur dealer licenses	
Xmas tree dealer licenses	
Beaver trapping licenses and tags	9,168.40 149.80
Sturgeon tags	
Interest on bank deposits	. 1,520.87 . 4,500.00
Emergency board receipts	11.498.70
Miscellaneous	. 11,450.70

\$617,158.29

### FORESTRY CONSERVATION

### Disbursements

Administration	\$ 15,000.46
Protection	
Fire Suppression	
Nursery	
State Forests.	17.854.52
County Forestry Aid	
Public Relations	8,911.84
Comment of Paragrams	2.864.80
Co-operative Forestry	Z,804.8U
Horicon Fire Prevention	
Miscellaneous	8,527.40
Beaver Control	4,450.24
Blister Rust Control	<b>498.88</b>
Unemployment Insurance	1,411. <b>29</b>
	<del></del>
Total	
Receipts	
1/10 mill forestry tax	\$422.141.44
Fire suppression charges	29.416.74
Clarke-McNary receipts	71,500.00
Clarke-markety receipes	11,000.00

### PARK LANDS

Total.....\$528,058.18

### Disbursements

Total	\$ 25,172.06
	Receipts

Park receipts	6,584.88 14,000.00
m-4-1	

### STATE FORESTS AND REFORESTATION

### CLASSIFICATION OF STATE-OWNED LANDS WITHIN WISCONSIN STATE FORESTS

Name of Forest	Location (county)	Forest Land* Acres	Trust Fund Land** Acres	Total
Brule River	Douglas	8,711 181,700 28,586 888 900	280 1,782 820 2,128	3,991 188,482 28,856 2,961 900
Total		165,680	4,510	170,190

^{*}Under jurisdiction of conservation commission. **Under jurisdiction of commissioners of public lands.

### ANNUAL OUTPUT OF STATE FOREST NURSERIES

Year	State Forest Planting	County Forest Planting	Private State & County Planting Highways		Total	
1911	*192.800	1				
1912	<b>**18.000</b>					
1918	68,500					
1914	458.480				478.680	
1915	,				77.400	
1916	216.650				826.850	
1917	882.525		272,105		604.680	
1918	262.485	l	246.278		508.768	
1919	809,900		200,151		510.051	
1920	113.875		206,682		820.557	
1921	255.925		199,601		455.526	
1922	88,710		89,482		128,192	
1928	176,800		177,260		354,060	
1924	168,800		247.000		410,800	
1925	160,700		850.588		511,238	
1926	424.200		748.497		1.172.697	
1927	579,000		1.038.249		1,617,249	
1928	687,200		1.101.464		1,738,664	
1929	1.022.750		1,898,267		2,416,017	
1980	981.500		1.185.075		2.166.575	
1981	2.050.850		1.804.250		3.354.600	
1982	5.701.500		880.815		6.581.815	
1988	1.278.550	2.954.800	822,950	90.500	5.141.800	
1984	6,564,940	8.617.845	1,486,725	27,000	16,696,510	
1985	2,892,840	7.844.825	1.876.189	550	12,113,904	
1986	8,021,650	6,484,882	8,592,224	29,450	13, 127, 706	
Total	27.962.080	25.901.852	17,076,102	147,500	70.877.234	

^{*}Stock secured from Michigan State College. *Stock purchased.

### DISTRIBUTION OF FOREST PLANTING STOCK—1935 TROUT LAKE NURSERY

County	State Forest Planting	County Forest Planting	Extension Planting	General Distri- bution	State & County Highway Planting	Total
dams			4,250	1,000		5,250
Ashland			11.000	1,000		12.000
Barron			20,000	1,000		21,000
Bayfield		400,000	2,800	8,000		410,800
Brown			1,900 7,900	1,000		2,900 7,900 100,500
Rumott		100,000	500			100,500
ChippewaClarkColumbiaCrawford				4,000		4,000 81,000 17,825
Clark			20,000 10,900	11,000 5,000		81,000
Columbia	1,925		10,900	5,000		17,825
Dane			200 700	5,600		200 6,800
Dodge			4,800	1,200		5,500
Door			1 1.200	1,200		1 200
Door	850,000		8.500	4,600		868,100
Dunn			I 12 MM	5,000		17,000
Care Claire			7,550	84,500	<b></b>	42,050
FlorenceFond du LacForest		242,400	7,550 2,000 1,800	2,000	<b></b>	244,400 3,800 285,800
Fond du Lac		228,800	5.500	1,000		995 900
Grant		228,800	500	4,700		5,200
Green			21,000	1		21,000
Green Lake			400	6,000		6,400
[owa			9,900	2,000		l 11.900
[ron	825,000	586,700		2,000 8,700 1,000	<b></b>	920,400
Jackson			<u></u>	1,000		1,000
Jefferson			5,200	2,000		5,200 217,200
Kenosha		215,000	200 200	2,000		217,200
Kewaunee		<b></b>	8,000			8.000
La Crosse			2,000	5,000		7,000
Lefayette			2,000	1,000		1 8 non
LafayetteLangladeLincoln	1,250 1,000	808,550	10.000	1		819.800
Lincoln	1,000	102,750	9,700	1,000	<b></b>	114,450
Manitowoc			5,125	8,500	- <b></b>	8,625
Marathon Marinette	180,170	720,525	20,500 42,750 5,500	5,500 28,000		26,000 972,446 5,500 17,950
Marquette	160,110	120,020	8 500	20,000		5 500
Milwaukee		l	2,100	15,850		17.950
Monroe			1,300			1.800
Oconto			600	4,500		5,100 1,863,870
Oneida	170,870	1,178,700	7,100	7,200 1,825 5,000		1,868,870
Outagamie Ozaukee			10,000	1,820		11,825
Dieree			2,100 5,800	8 500		7,100 9,800
Polk	5.000	[	4,400	8,500 11,500		20,900
Pierce Polk Portage			4,400 111,850			111.850
Price			24.400			24.400
Racine			2.000	1,000	J	8.000
Kichiand			25,000	1 2.000		27,000
Rock		<b></b>	EG - OED	1,500		1,500
St. Croix			58,250 6,500	6,000		58,250 12,500
Sank			8,000	6.000		14.000
Sauk Sawyer			8,000 12,700 900	8,000 8,000		15,700
Shawano			900	l <b>.</b>	- <b></b> -	14,000 15,700 900
Sheboygan			8,200	2,000		10,200
Taylor Trempealeau			2,650	1,000		8,650
TrempealeauVilas	604,850	100,000	1,000 11,200	1,900	<del></del>	2,900 788,450
Walworth	000,000	100,000	900	17,400 8,150 8,000		8,850
Washburn			12.200	8,000	l <b></b>	15.200
Washington			4,800			4,800
Washington Waukesha			4,800 1,200 84,500	11,000		4,800 12,200
Waupaca	600		84,500	5,500		1 40.KW
Waushara		- <b></b>	1 224.995	8,500		228.498
Winnebago	800,100		1,800	5,000 1,000		6,800 808,700
Wood	900,100		2,600	1,000		008,700

### DISTRIBUTION OF FOREST PLANTING STOCK—1936 TROUT LAKE NURSERY

County	State Forest Planting	County Forest Planting	Extension Planting	General Distri- bution	State & County Highway Planting	Total
Ashland			11,800	18,275		25,078
Barron			20,000			20,000
Bayfield			22,625	2,000		24.62
Brown			400	2,000		2,400
Buffalo			1,000	8,000		4,000
Burnett		601,850	8,000	8,000		607,850
Chippewa		102,000	20,200	4,000		24,200
Chippewa Clark Columbia				5,500		5,500
Columbia	875		900	8,000		4,27
Dane			450	4,800		4,75
Dodes	1		700	8,200		8.90
Door			5,000	1,000		6,000
Door	1.417.840		14,600	5,800		1,488,24
Dunn	1,41,000		1,000	0,000		1,00
Eau Claire				10,000		10,000
Florence				1,000		1,00
Porest			2,000	1,000		2.00
Trant			1,800	1,000		2.30
Forest Grant Green			7,800	1.500		1.800
Green Lake			600	1,200		1.800
Jioen Dake			800	1,200		1,700
owa	552,600	142,000	950	1,400 87,150		782,700
lackson	552,000	142,000	6,450	1,500		7,950
Jefferson			0,400	2.000		2.000
Juneau				1,000		1.000
Kenosha						2.000
Kenosna				2,000		
Kewaunee La Crosse			8,150	<b></b>		8,150
La Crosse Langlade Lincoln			718,100			718,100
anglade			18,000	6,800		19,800
Lincoln Manitowoc	200		26,750	<u></u> -	<b></b>	26,950
Manitowoc			200	4,900		5,100
Marathon			20,000	1,000	<b></b>	21,000
Marinette		908,850	47,500	28,100		978,950
Marquette				24,000		24,000
Milwaukee			400	9,100	<b></b>	9,500
Monroe			200			200
Deonto			7,000 17,000	7,000	<b></b>	14,600
Deonto Dneida	802,225	490,000	17,000	2,500	<b></b>	811,720
Jutagamie		l	100	2,800	<b></b>	2,400
<b>)zaukee</b>		1	300	5,000 2,900	<u>-</u>	5,300
Pepin	<b></b> -	<b></b>		2,900	<b></b>	2,900
	<b></b> -		8,200			3,200
Pierce Polk	1,000		20,000	42,225	<b></b>	68,226
ortage	1	1		1,000		1.000
Price	. <b></b>		46,800	20,000	l <b>.</b>	I 66.309
Racine	2.000		<b></b>	l		2,000
Richland			1,200	l	1	1,200
Rock				12,000	1	12,000
Rusk		125,000	18.050	8,000	2,000	158,050
St. Croix			26,800	2,000	1	28,300
auk			2,900	8,050		5,950
lawver			10,000	4,000		14,000
heboygan	2,000		200	1 -,550		2,200
hawano			20,000	12,000	l	82,000
Caylor	<b></b>		19,450	4,000		28,450
rempealeau	· -   - <del></del>		8,400	2,600		6,000
/ernon			600	1 900		1,800
/ilas	160,800		14,000	1,200 27,200	19,500	221,000
Waiworth	100,000		100	2,000	13,000	9 186
Washburn		888,000		2,000		2,100 857,575
		888,000	19,575	9 000		901,018
Waukesha Waunaca				8,200		8,200 11,250
			8,000	8,250		11,284
Waushara			500	2.000		2.490
Winnebago			400			22,050
Wood	17,050	J		5,000		ZZ, U00
Total	O AEE EGG	2,604,700	1,181,450	358,150	21,500	6,621,390

### DISTRIBUTION OF FOREST PLANTING STOCK—1935 WISCONSIN RAPIDS NURSERY

County	State Forest Planting	County Forest Planting	Extension Planting	General Distri- bution	State & County Highway Planting	Total
Adams			2.000	]		2,000
Brown			500			
Burnett	·	100 000				100,000
Clark		100,000	2,000			
Columbia	·}		2,000	2.975		
Dane	<b></b>			8.512	<b>-</b>	
Douglas.				0,012		800.000
Eau Claire		405,200				
		400,200				
Grant				1,000		
Green Lake			1,000	l <u></u>		1,000
Iowa				8,000		8,000
Iron			10,000			10,000
Jackson			60,000	1,000		
Juneau	<b>-</b>	617,050	5,000	8,600		
La Crosse			8,000			8,000
Lafayette			8,000			3,000
Marquette				200		
Milwaukee			8,000			8,000
Outagamie	l			10.650		10.650
Portage		l	80.075	4.877		84.952
Richland	l	l		10.000		10,000
Rock			5.000			5.000
Rusk	1	625,000				625.000
Sauk	1	1		1,400		1.400
Sawyer		1.000.000		-,		1,000,000
Sheboygan		1,000,000	2.800			
Taylor			4.000			
Trempealeau				2.000		
Waukesha				2,000		
Waupaca			9.825	4.480		18.805
Waushara			18,650	11.700		25,850
Wood			7.800	5.200	550	627,200
W 0001		014,100	1,000	0,200	990	021,200
Total	800,000	3,561,400	161,150	67,594	550	4,090,694

### DISTRIBUTION OF FOREST PLANTING STOCK—1936 WISCONSIN RAPIDS NURSERY

County	State Forest Planting	County Forest Planting	Extension Planting	General Distri- bution	State & County Highway Planting	Total
Adams	l		95,755	  - <b></b> -		95,758
Barron			2,000			2,000
Bayfield				1,000		1.00
Bayfield Brown			8,000	<b></b> -		8.00
Buffalo	I		4,750			4.75
Chippewa				1,000		1.00
Clark		230.000	22,450	10,050		262,500
ChippewaClarkColumbia			21.550	1.800		28.85
Crawford			2,200	150		2,850
Dane		1	16,200	18,050		29,250
Dodge						12,000
Douglas			<b> </b>	180,000		180,000
Dunn		l <b></b>	<b></b>	2,000		2,000
Sau Claire	l	812,220	18,100			825.82
Fond du Lac			12,300	1,100		18,500
Grant			24,500			24,500
Green		<b></b> -	15,000			15,000
Green Lake	<u></u>	l	6,000			6,000
lowa	l	. <b>.</b>	88,675	5,000		38,67
sckson		764,480	8,875	5.800		778,60
lefferson			5,000	1,000		6,000
Juneau			88,470	42,000		75,470
Kenosha				100		100
Kewaunee			11,500			11,500
La Crosse			162,825	5,000		167,820
Lafayette Langiade Lincoln			20,500			20,500
Langlade		454,552	2,025			456,577
incoln		216,700		2,000		218,700
Manitowoc			5,000			5,000
Marathon		<b>-</b>	17,000	1,000		18,000
Marathon	100,000	749,680				849,680
marquette			65,225	1,200		66,42
Milwaukee			11,100	8,000		14,100
Monroe		40,000	20,075			60,078
Outagamie		·	19,200	1,000		20,200
raukee			5,850	1,000		6,850
epin		·	16,500			16,500
Pierce			10,000	:		10,000
ortage			175,825	1,000		176,825
Racine			28,565	6,000		29,56
			20,000	5,884		25,884
Rock			80,500	1,250		81,750
Bauk			7,700	2,150		9,850
heboygan			40,725	8.000		40,725 8,000
St. Croix			2,400	8,000		2.400
l'aylor			14,600			14.600
/ilas			14,000	125,000		125.000
Waiworth			29,575	100		29,675
Vauworth			28,000	2.000		30.000
Vaukesna			80 450			80 450
Vaushara			60,450 184,150			184,150
Vinnebago			17,475			17,475
Vood.		820.100	65.800	8.000	7.950	401,350
• • • • • • • • • • • • • • • • • • • •		320,100	00,000		.,550	101,500
Total		3,587,682	1,897,990	887,184	7,950	5.480.756

STATE TREE PLANTING PROJECTS-1935

					Species	•		•			Acres	
Forest	Agency Doing Planting	Norway Pine	White Pine	Jack Pine	White Spruce	Norway	Scotch Pine	Black Locust	Total	New Planting	Re- planting	Total
Jackson County.  Jackson County.  Burnett County.	Camp Arbutus Lake Jackson County Camp Riverside	199,550 60,000 108,550		182,130					199,550 60,000 285,680	200 80 268		200 89 89 89 89
Sawyer County .	Camp Smith Lake	454,000	294,000		160,000	262,000	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1,160,000	989		686
Oneida County	Camp Blue Lake	262,000	180,425	68,000					500,425	246	150	896
Oneida County Brule State		237,000 150,000 58,450	281,400 100,000 144,800		85,000	65,800			568,700 250,000 344,250	300 340 340		8 810 840
Northern State Northern State		87,226 95,000 10,000	110,800 185,000 110,000	156,500 45,000 262,625	13,000				817,025 825,000 887,625	274 258 248	62 10	886 268 248
American Legion	Camp Mc- Naughton	800	009	129,900		88,800			170,100	191	:	191
Marinette Co Marinette Co Marinette Co	Camp Atheistane Camp Dunbar Marinette Co Camp Globe	41,150 50,000 829,900	861,500	188,826		859,060			179,475 720,560 100,000 885,850	189 587 100 278	197	836 100 278
Iron County Iron County Langlade County Rusk County	Camp Upeon Iron County Camp Elcho	114,600 250,000 9,800	177,060 50,000 65,050		289,880	45,000 284,875 328,450			291,650 345,000 349,425 578,100	290 450 428		290 450 428
Rusk County Florence County Forest County	Rusk County Florence County Camp Laons	14,250 120,850	122,050 126,150		19,800	61,850			95,400 242,400 328,800	227 208		227 208
Lancoin County	Wood		161,000		164,650	141,750			467,400	810		810

STATE TREE PLANTING PROJECTS-1935-Continued

				•	Species	•	•	-		-	Acres	
Forest	Agency Doing Planting	Norway Pine	White Pine	Jack Pine	White Spruce	Norway Spruce	Scotch Pine	Black Locust	Total	New	Re- planting	Total
Vilas County Bayfield County Eau Claire Co	Vilas County Bayfield County Camp Fairchild Camp Petenwell.	100,000 100,000 135,850 167,000	19,150	800,000		800,000			100,000 400,000 155,000 817,000	200 400 124 884		004128 00428
Inneau County funeau County Wood County	Camp Douglas Camp Finley Camp Petenwell. Camp City Point	148,000 230,500 85,000 74,850	22,000	65,000		86,000		62,000	218,000 252,500 87,800 609,950	178 268 85 810		258 258 85 610
otal	Total	8,588,825	8,001,525	1,587,480	788,800	1,779,285	800	62,000	10,787,165	8,769	419	9,188

## STATE TREE PLANTING PROJECTS-1936

					Species					Acres	
Forest	Agency Doing Planting	Norway Pine	White Pine	Jack Pine	White Spruce	Norway Spruce	Black	Total	New Planting	Re- planting	Total
Jackson County Jackson County Jackson County Burnett County	Camp Arbutus Lake Camp City Point. Jackson County Camp Riverside.	647,450 130,000 80,000 833,420	19,960	10,000 170,100 207,940				684,450 320,050 80,000 541,860	248 150 80 145	476 156 815	719 806 80 80 80
Sawyer County Oneida County Oneida County	Camp Smith Lake	144,000 158,840 216,700	286,110	815,490		248,050		678,160 469,880 216,700 50,000	250 100 182 30	191	182 182 50 50
Brule State Northern State Northern State Northern State	Camp Brule Camp Mercer Camp Crystal Lake Camp Star Lake	521,880 274,040 65,840 113,740	464,250	882,480			8,000	986,180 606,520 73,840 194,180	560 404 128	396 166	956 570 20 128
Clark County Clark County Iron County Marinette County	Camp Globe Clark County Camp Upson Camp Dunbar	455,740 160,000 165,840 40,680	10,770 70,000 109,810 292,810	805,760 882,000		6,000		772,270 230,000 280,650 665,490	264 250 117 208	404 808	668 250 117 516
Marinette County Marinette County Langlade County Rusk County	Camp Crivitz. Camp Athelstane. Camp Elcho. Camp Rusk.	193,840 100,000 43,650	126,900	781,870	105,942	148,960 125,000		1,162,400 100,000 425,452 125,000	918 100 285 860	60 185 180	978 100 420 690
Washburn County American Legion Eau Claire County Monroe County	Camp Minong Camp McNaughton Eau Claire County Monroe County	838,000 172,100 40,000 40,000	54,500	70,000		110,000		838,000 406,600 40,000 40,000	300 277 40 40		300 277 40 40
Vilas County	Boulder Junction			19,500				19,500	19		19
Total		4,457,260	1,672,290	2,625,580	105,942	687,010	8,000	9,506,082	6,890	8,127	8,517

## OUTPUT OF STATE FOREST NURSERIES

			1986					1986		
Species	State Forest Planting	County Forest Planting	Private Planting	State & County Highways	Total	State Forest Planting	County Forest Planting	Private Planting	State & County Highways	Total
Gordon Nursery Norway Pine Socker Pine White Pine White Spruce	524,675 127,400	100,000	21,000		624,675 21,000 127,400	801,000	292,000	153,000 40,000 74,500		445,000 205,000 875,500
Trout Lake Nursery Black Locust Jack Pine Norway Spruce Scotch Pine White Pine White Spruce	698, 866 842, 636 417, 760 461, 726 19, 500	828,000 998,950 907,260 1,454,215	72, 576 843, 996 217, 950 94, 276 800, 060 97, 600		1, 598, 930 1, 685, 580 1, 642, 960 94, 575 2, 216, 990 117, 100	8,000 412,800 1,151,086 198,050 685,865	1,028,800 1,117,290 125,000 884,110	19,750 87,525 5199,3850 2118,550 4,750 637,800	19,500	27 750 1, 27 750 2, 867 725 588 600 4, 750 1, 657 275 27, 225
Total	1,940,265	4,188,425	1,126,445		7,250,185	2,455,650	2,604,700	1,589,600	21,500	6,621,460
Nursery Black Locust Jack Pha- Norway Spruce Scotch Phe- White Phe- White Spruce	800,000	52,000 16,125 1,317,065 454,225 1,085,585 636,400	18,000 79,170 9,000 70,200 67,874	990	65,000 16,125 1,696,235 468,225 1,155,786	100,000	1, 184, 480 1, 796, 890 148, 960 851, 810	100,126 189,076 298,770 319,170 268,894 871,716 247,860	6,950 600 600	1,878,506 2,202,610 2,202,610 268,646 724,026 852,952
Total	800,000	8,561,400	228,744	999	4,090,694	100,000	8,587,682	1,785,124	7,950	5,480,756
Grand Total 2,89 Grand Total for Biennium	2,892,840 nnium	7,844,825	1,876,189	220	12,118,904	8,021,650	6,484,882	8,692,224	29,450	18,127,706 26,241,610

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### **COOPERATIVE FORESTRY**

### WORK ON COUNTY FORESTS-JULY 1, 1934-JUNE 30, 1936

County	Land Survey- ing Sq.	Fire Break	Fire Hazard Reduct'n	Forest Planta- tion	Timber Stand Improve- ment	Blister Rust Control	Type Mapping
	Miles	Miles	Acres	Acres	Acres	Acres	Acres
Ashland	14						85,000
Bayfield	24	6.0	100	925	960		<b></b>
Burnett	94			1,285	4,016		<b></b>
Clark	4	- <b>-</b>	4,288	1,095	690		
Douglas	86	6.2			690		
Eau Claire				821	1,865		
Florence		4.0		227			
Forest			150	208			
[ron	87			<b>518</b>			
Jackson		- <b></b>	1,480	1,389	2,255		
Iuneau	40	<del>-</del>	2,100	996	840		- <b></b>
Langlade	86	7.2	1,484	1,174	70	8,619	
Lincoln				200	<b></b> . <b>.</b>		
Marinette	108	18.2	242	1,595	841	2,682	115,720
Monroe				40	<b>-</b>	- <b>-</b>	
Oneida	107		. <b></b>	1,282	- <b>-</b>	<b></b>	45,280
Price	18	<b></b>	. <b></b>	88		. <b></b>	80,000
Polk	. <b></b>	<b></b> .	. <b></b> . <b>.</b>		744		
Rusk	28	40.0		1,188	2,020		18,000
Sawyer	10	51.5	l	1,608	1,627	28,370	135,360
Vilas	26	8.5	1	180		1,689	
Washburn		l	1		4.620		l - <b></b>
Wood			2,170	759			
Totals	627	136.6	11,909	15,023	19.738	31.310	874.860

### FOREST CROP LANDS BY COUNTIES Entry of Forest Crop Lands by Counties

,			Private Entries	tries			Ö	County Entries	•		Total
County	Prior to 1984	1985	1986	With- drawn	Net Private Lands	Prior to 1984	1985	1986	With- drawn	Net County Lands	Lands
dama	1.885.27				1.885.27						1.885.2
pulland	24,664.95			21,859.21	2,805.74	14,700.68		8,760.00		18,460.68	21,266.42
3arron					651.62						
Bayfield	7,911.91			8,171.20	4,740.71	84,118.54	6,187.75	14,220.45	280.00	108, 191.74	107,982.4
rnett	1,966.87			200.09	1,406.87	29,671.38		27,976.88	966.92	56,681.24	
ppewa	8,979.96			240.00	8,789.96						8,789.9
Clark	8,865.55				8,865.55	88,004.56	9,164.88	10,828.61	8,889.16	104,108.75	107,474.8
)oor	1,001.90				1,001.90						
Douglas	2,606.07			280.08	2,825.01	120,089.52	12,969.02	26,441.79	886.09	157,604.24	159,929.2
nn	176.38				176.38						176.8
Sau Claire	1,287.42				23	17,947.78	4,958.96	1,810.41	1,867.11	22,869.99	24,097.4
lorence	87,244.82	4,180.27	1,468.10	4,624.75	88,817.94	80,010.08		_	2.931.75	87.788.08	76,055.9
orest				15,488.95	50,772.26	49,428.40			89.277.24	10,146.16	60.918.4
	859.25				859.25	48.908.58	17.822.18	_	760.00	106, 527, 61	
ackaon	160.00				160.00	86.879.80				94 859 16	
1100011	160 00				160.00	58 210 57		8 178 84	1 219 92	56 189 49	
anglade	17.898.84			820.00	17. 678.84	71, 292, 81	720 00	400.00	8 906 24	68 507 57	86 080 9
ingoln	9 305 80	-		9 078 98	7 940 68	14 471 44	40 894 9K	8 440 18	0 617 01	64 717 96	71 967 5
ferethon	1,562.40			808 44	268 96			07:01	10:110:4	20.11.6	1 258 9
Carinotto	686 49		120 00	128 06	688 48	128 486 76	26 554 58	98 958 17	9 K9K 19	174 760 99	175 469 7
farmette	26.00		3	20.00	26.00	21.002.004	20.03	11.000	0,040.10	09.00.121	55.2
	-				3	8 000 1K		K 401 09		14 400 07	14.00
Control Control	36 200			977 00	700 90		10 000 47	40.101.0	20 107 4	10.000.01	10.00
South Section 1	04.049.40		00 00	1 494 98	90 945 49	0. 110.00 07 511 94	16,001.51	97 KOO 10	90.100	100,000.01	169, 100.0
	•		3	7,404.00	20.020		10,006.00	28.720'17	1,001.40	100,040.001	#. #10. oot
	1 990.00				20.00			9 400 70		1 200 90	0.010
0.000	20.077				1,410.00			61.005.19		1, 100.04	0,040.0
	K 094 18			00 000	K 044 19	į	A KKO KO	-	90 07	00 404 00	0.011.00
Dist.	201.10			K 479 KB	0,010	20, 100. ag		2 600 00		76 510 70	20.00
2000	09.780			0,010,0	9,010,0		1,000.00	1,002.20	1,020.00	87.0TO.01	0.020.8
CIONALLIA	10 640 18			TK OKO RR	2 K80 K0	87 699 18		00 164 99		RK 798 48	40 97F.0
Shewan				30.00	410.74			99.103		2001.00	
Taylor	1 618 42			1 127 18	701	į				9 A77 97	9 168 F
io de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de	07 600 6			77.102	201.100		00 404 0	K 707 00	1 441 90	41 778 89	1000
achhurn	882	80 00			042.69	54 600 57	17, 590.91	80. 8X8. 08	1 268 76	74 885 10	75 897 7
110.00	979 80	-		179 80	100						001
Wood	6.663.66				6.668.66	18.279.51	8.004.08	2.704.62	1.600.00	17.888.16	24.051.82
			Ţ							_	-
Totals	257.668.04	4, 190, 27	1.668.10	78.098.47	187 422 04	1 181 480 71	101 149 01	01 000 110	20 0110 00	00 110 028 1	2. 20. 2.0

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### FOREST PROTECTION

### SUMMARY OF FOREST AND MARSH FIRES FOR 1935 AS REPORTED BY DISTRICT FOREST RANGERS

District	No. of Fires	Acres Burned	Acres per Fire	Reported Damage	Under ¼ Acre	10 Acres	10 acres and over
1 2 8 4 5 6 7	87 29 43 86 112 78 47 89	887 186 47 101 249 54 85 126	10 5 1 8 2 1 1	249.00 50.00 60.00 105.00 50.00 58.00 7.00 48.00	28 8 24 18 87 49 20 6	46 24 18 20 69 28 27 29 89	18 2 1 8 6 1
9 10	60 85	179 66	8 2	2.00	18 9	89 25	8 1
Total or average	561	1,880	8	619.00	202	820	89

### FOREST AND MARSH FIRES—1935 Number, Area, and Damage by Causes

Cause	Light- ning	RR	Log- ging	Clear- ing	Camp Fires	Smok- ers	Incen- diary	Misc.	Total
Number Acres Burned Dollars damage	8 0 0	58 58 2		152 867 224		198 928 120	92 852 216	97	1,880

### FOREST AND MARSH FIRES—1935 Acres Burned by Land Classes

Dist. No.	Merchant- able Timber	Young Growth	No Forest Growth	Total Forest Lands	Non- Forest Lands	Total Acres Burned
1 2 8 4 5 6 7 8 9	0 0 1 0 0 0 0 0 67	221 88 29 18 103 11 15 88 13	180 20 5 16 42 2 8 6	851 58 35 84 145 18 44 80 22	486 78 '12 67 104 41 17 82 99	887 186 47 101 249 54 85 126 179 66
Total	68	506	226	800	1,080	1,880

### FOREST AND MARSH FIRES—1935 Damage by Class of Damage

Tir	nber	n	Other	Total
M. B. F.	Value	Reproduction Value	Values	Damage
5	\$ 20.00	\$ 446.00	\$ 153.00	\$ 619.00

### SUMMARY OF FOREST, FIELD AND MARSH FIRES FOR 1936 AS REPORTED BY DISTRICT FOREST RANGERS

				ļ	No. of fi	res by siz	ciames	
Dist. No.	No. of Fires	Acres Burned	Acres per Fire	Reported Damage	Under ¼ Acre	% to 10 Acres	Over 10 Acres	Per cent 10 acres or less
1 2 8 4 5 6 7 8 9	202 220 228 206 195 211 290 177 280 204	78,311 1,810 511 1,566 679 450 15,909 648 5,248 1,187	868 6 2 8 4 2 55 4 19	\$105,943.00 479.00 1,641.00 458.00 257.00 615.00 18,533.00 867.00 7,765.00	71 58 157 64 117 167 72 88	101 156 59 118 117 84 112 99 155 129	80 11 7 21 14 10 11 6 42 20	85. 95. 97. 90. 93. 95. 96. 97. 85.
Total or	2,208	100,814	46	\$189,160.00	906	1,180	172	92.2
Per cent					41.	51.	8.	100.

### FOREST AND MARSH FIRES—1936 Number, Area, and Damage by Causes

Cause	Light- ning	RR	Log- ging	Clear- ing	Camp Fires	Smok- ers	Incen- diary	Misc.	Total
Number	127 554 509		47	279 10,049 14,882		844 41,902 86,015			2,208 100,814 189,160

### FOREST, FIELD AND MARSH FIRES—1936 Acres Burned by Land Classes

Dist. No.	Merchant- able Timber	Young Growth	No Forest Growth	Total Forest Lands	Non- Forest Lands	Total Acres Burned
1 2 3	0 25	46,278 884	25,808 111	71,586 470	1,725 840	78.811 1,810
4	7 0 0	278 824 277	16   589   188	296 918 415	215 658 264	511 1.566 679
5 6 7 8	890 0	256 7,099 189	4,177 175	324 12,166 864	126 8,748 284	450 15,909 648
8 9 10	4ŏ	3,377 522	78 209	8,490 781	1,758 456	5, <b>248</b> 1,187
rotal	962	58,929	80,864	90,755	10,059	100,814

### FOREST AND MARSH FIRES—1936 Damage by Class of Damage

Ti	mber	Reproduction	Other	Total
M. B. F.	Value	Value	Values	Damage
809	\$ 10,490	\$ 118,758	\$ 9,917	\$ 189,160

### FOREST AND MARSH FIRES-1936 Record by Years

Year	Total Cost of Pro- tection	Area under Protection in Million Acres	Cost per Acre in Cents	No. of Fires	Percent of fires 10 acres or less	Area Burned Over	Acre- age per fire	Damage
1929 . 1980 . 1981 . 1982 . 1983 . 1984 . 1985 . 1986 .	164,660.28 812,855.22 384,260.44 433,612.14 523,491.59 896,894.84 271,098.95 456,920.01	18.5 18.6 18.1 18.1 12.7 12.7 12.1 18.6**	1.2 2.3 2.9 8.8 4.1 8.1 2.2 8.8	960 2,300 2,340 3,168 3,659 2,873 561 2,208	88.2 82.5 66.7 72.0	108,888 518,856 840,979 119,458 259,041 127,793 1,880 100,814	109 228 274 88 71 44 8	\$ 72,770 460,627 421,501 69,320 826,784* 115,419 619 189,160

^{*} Revised damage schedule adopted. ** Revised area and cost report.

### FOREST AND MARSH FIRES-1936 Expenditures by Years

Year	Contributed	Contributed	Contributed	Total Cost
	by	by Federal	by	of
	State	Government	Counties	Protection
1929	\$ 110,989.71	\$ 38,137.40	\$ 15,588.17	\$ 164,660.28
1930	183,181.85	48,788.48	85,940.44	\$12,855.22
1931	268,622.80	51,819.05	63,818.59	884,260.44
1932	814,301.49	67,015.00	52,295.65	488,612.14
1933	869,082.79	51,789.00	164,408.80	523,491.59
1934	242,744.85	109,200.00	44,949.99	896,894.84
1934	201,819.84	67,724.58	1,550.08	271,098.95
1936	812,308.09	65,285.42	79,381.50	466,920.01

### FOREST AND MARSH FIRES-1936 Allotment of Expenditures by Years

Year	Adminis- trative Expense	Field Personnel	Equipment and Improvements	Fire Fighting	Total Cost
1929 1980 1931 1932 1988 1984 1985	\$ 8,000.00 6,857.82 17,848.18 89,616.95 27,598.71 48,881.51 47,808.05 40,222.21	\$ 77,645.51 108,112.49 156,131.28 198,876.85 169,962.11 146,681.68 151,609.49 184,915.91	\$ 52,848.40 81,084.52 82,648.80 90,527.08 48,902.17 116,481.72 68,581.32 78,118.88	\$ 81,168.87 171,880.89 127,687.18 104,591.81 828,817.60 89,899.98 8,100.09 158,663.01	\$ 164,660.28 312,855.22 884,260.44 488,612.14 523,491.59 896,894.84 271,098.95 456,920.01

### STATE PARKS

### WISCONSIN STATE PARKS

Name	Location	Size	How	Year	Address of Park	Reached by
	(County)	(Acres)	Acquired	Estab.	Custodian	Highway
State Parks: Interstate Pentantia Pentantia Pertor Deviti Lake Netson Dewey Pertor Pattison Rib Mountain Rib Mountain Potawatomi Potawatomi Copper Falis Merrick	Polk Door Sauk Grank Trempesleau Douglas Door Door Sheboygan Buffalo	280 1,440 1,644 1,1010 1,140 1,080 1,080 1,080 1,080 291	Purchase Purchase Purchase Gift Gift Gift Purchase Purchase Gift Gift	1900 1910 1911 1917 1918 1920 1928 1928 1928	St. Croix Falls Fish Creek. Baraboo. Wyalusing Trempesleau Wausau Fish Creek Sheboygan Mellen Reilen Fountain City	252 122 123 121 121 131 131 131 131 131 13
Roadaide Parks: Ojibwa Rocky Arbor New Galrus Woods	Sawyer Juneau Green	126 238 48	Gift Purchase Purchase	1982 1982 1984	Hayward. Wisconsin Dells New Glarus	70 12 69
Eletorical-Memorial Parks: Cushing: Tower Hill First Capitol. Nelson Dewey Farnstead	Waukesha	10	Gift	1915	Delafield	80
	Iowa.	55	Gift	1922	Spring Green	14
	Lafayette	720	Gift	1924	Belmont	118
	Grant.	720	Purchase	1986	Cassville	188

STATE PARK ATTENDANCE RECORD-1935

	April		May		June		July	<u>.</u>	August		September		ŏ	October	Ē	
Name of Park	Carre	Visitors	Carr	Visitors	Carre	Visitors	Carre	Visitors	Carr	Visitors	Cars	Visitors	Carr	Visitors	Cars	Visitors
r Palle	6.	134	273	2.543	1,116	4,622	1,820	7,280	2,199	10,100	1,469	8,565	2550	2,228	7,476	83,472
Lake.	1,227	30,8	5,670	8 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	18.380	18 8 8 8 8 8 8 8	- 74 - 28 - 28 - 28 - 28 - 28 - 28 - 28 - 28	198.200	20 20 20 20 20 20 20 20 20 20 20 20 20 2	159,900	8, 18, 18, 18, 18, 18, 18, 18, 18, 18, 1	30,915	2,68 ₂	8, 878, 878,	134,200	505.835
terstate	328	195	2.213	38.5	3,535	15.929	252	24.784	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	18,271	3,418	16.117	122	3,523		8.8
n Dewey	885	1.882	874	496	812	2,5	288	10,196	8 8 8	87.7	2.5 2.5 2.5	96,6	967	2.916	11.	89.287
anla	146	4.8	98	5,398	2,262	8.000	4 25 25 25 26	13,700	8.277	26.518	- - - - - - - - - - - - - - - - - - -	711.7	1.632	. 25. 25. 25.	20°28 077	66.579 8.578
fountain	925	372	200	2.682	3,437	7.915	3,892	15,163	4,419	797	4 8 8 8 8 8 8	3.349	528 528 728 728	2,865	13,758	25 22 22 23 25 25 25 25 25 25 25 25 25 25 25 25 25
Ferry Andrae Fower Hill	128	<b>436</b>	378 888	2,190	1,303 796	3.087	4.1 88.0 88.0	13.962	1.651	10,995 5,589	1.668	5.515	1.631	3.000 2.000	12,442 6,113	23 1,609 1,028
Total	3,439	12,865	18,193	71,104	40,509	160,578	149.48	338,480	87,867	290,565	28,734	107.823	13,030	42,514	276,413	1,023,929

STATE PARK ATTENDANCE RECORD—1936

	_			_		_		_	_	<u> </u>	_	-		
E P	Visitors	33,474	7,184	8.196	180,879	8. 8. 8. 8. 8.	215,611	77,217	17.460	41.679	26	26.98 88.98	1,224,767	
	Cars	10.339	12.067	2 992	44 ,549	986.	78.437	23.159	<b>4</b> .837	10.741	10.00	6.825	364,337	
October	Visitors	2,218	192	437	14,187	328	4 535	6,014	758	283	0.020	2,428	56,181	
Oct	Carre	99	28.5	3	8,857	347	1.1	1,736	283	994	20,2	29	17,895	
mber	Visitors	5,905	20 862	88	22,748	4.119	45.579	8,626	2,110	8	38	38	149,730	
September	Carr	1,478	230	316	5,579	286	16.556	2.477	537	813	9,118	1,178	44,920	
August	Visitors	9,687	11,004	1 627	36,809	11.182	52,00	29,826	4 ,377	17,918	38.4	5,323	325,909	
γn	Cars	3,100	24 568	88	9.212	2,970	17.770	8,700	1.129	4.77	5,6 5,6	1,366	93,920	
ų	Visitors	9,228	140 578	1.595	40,370	8	53.092	16,463	4,617	88	18,270	800	352,506	
July	Carr	4.372	1707	3	10,850	5.10	17.984	5,306	1,386	8	16.	1,278	103,993	_
98	Visitors	3,577	1,871	2008	34 ,362	17,628	200	9,112	948	9,50	3,4	188	201,254	
June	Care	906	625	88	7,54	2.30	14.271	2,418	1,113	1,560	176	927	56,309	
a,	Visitors	1,562	1,329	926	19,668	5.217	12,506	4,116	1.158	25	33	3.485	81,747	
May	Carra	483	361	421	4,856	   	288	1,323	280	<b>2</b>	3.4	8	23,274	
pril	Visitors	1,207	15 506 257	486	12,736	880	983	4,062	492	85	127	90	57,441	
γÞ	Carre	352	83	136	2,651	88	25	1,205	110	25	- - - - - - - - - - - - - - - - - - -	210	15,026	
Newsoff But	Name of Cark	Copper Palla	Cushing Memorial	First Capitol	Interstate	Merrick	Pattienn	Peninsula	Perrot	Potawatomi	Terry Andrea	Tower Hill	Total	

# **FISHERIES**

# DISTRIBUTION OF FISH BY SPECIES AND SIZE—1935

Brook trout fingerling	5,028,581	
yearling	8,970	
(20 month)	2,625	
adult	118	5,085,289
•		
Brown trout fingerling	8.826.088	
yearling	18,880	
(20 month)	8.140	
adult	1,056	8,848,564
	- •	• •
Rainbow trout fingerling	1,808,840	
yearling	81,660	
(20 month)	17,275	
adult	461	1,408,286
		_,,
Lake trout fry	23,172,886	28,172,886
Dane wout ity	20,112,000	20,112,000
Well Ford Dile Ann	450 000 000	
Wall Eyed Pike fry	472,200,000	470 000 1EG
adult	159	472,200,159
Muskellunge fry	5,685,000	
(12 inch)	24	5,685,024
Black bass fingerling	517,285	
yearling.	55	517,840
Bluegill fingerling	105,900	
yearling	900	106,800
•	•	•
Perch fry	1.800.000	
fingerling	87,500	
yearling	975	1,888,475
,		2,000,000
Pickerel fry	690,000	690,000
t remote it y	000,000	050,000
Misc. fingerling	48,598	
yearling	298,600	842,198
Joseph 10 10 10 10 10 10 10 10 10 10 10 10 10	200,000	012,100
Normal Barrer Or senting		
Neenah Rescue Operation	999 050	000 050
White bass fingerling	888,950	888,950
Gills Landing Operation	==	
Black Bass fingerling	78,900	78,900
Pickerel fingerling	<b>282</b> , 100	282,100
Wolf River Operation		
Black bass adult	2,448	2,448
Misc. fingerling	7,600	
yearling	206,650	<b>214,2</b> 50
•		
Wisconsin River Operation		
Black bass	6.665	
Wall eyed pike	445	
Pickerel	1,757	
Perch	1.550	
Croppie	182,550 52,850	
Sunfish	52,850	
Bullhead	89,600	
Bluegili	114,400	
Catfish	4,176	444 444
Miscellaneous	7,500	411,498

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# DISTRIBUTION OF FISH BY SPECIES AND SIZE—1935—Continued

Mississippi River Operation		
Black bass	128,169	
Pickerel	26.852	
Bluegill	108.950	
Bullhead	64.789	
Croppie	8.469.202	
	8,680,698	
Sunfish		
Wall eyed pike	1,018	
Perch	1,211	
Catfish	700	
White Bass	2,049	7,478,078
Misc. Rescue Operations		
Black bass	95,852	
Bluegill	144.188	
Bullhead	60.125	
Croppie	129.888	
Northern Pike	1.881	
	2.997	
Perch		
Pickerel	808	
Sunfish	77,248	
Wall eyed pike	9,970	
Catfish	100	
Muskellunge	58	
Miscellaneous	126,000	649,060
Total		528.245.145

# SUMMARY OF FISH DISTRIBUTION-1935

Brook Trout	5.085.239
Brown trout	8.348.564
Rainbow trout	1.408.236
Lake trout	28.172.836
Wall eyed pike	
Muskellunge	5.685.082
Black bass	
White bass	885,999
Bluegill	469.838
Sunfish	8.810.791
Croppie	8.781.590
Perch	1.894.233
Pickerel	
Northern pike	1.881
Pullband	214.464
Bullhead	4.976
Catfish	
Miscellaneous	689,948
•	-64

# FISH DISTRIBUTION BY HATCHERIES-1935

Hatchery	Quantity from each Hatchery	Total Number from each Hatchery
Bayfield		5,555,226
Brook Trout Fingerling 1,671,250 Brook Trout Adult 15	1,671,265	
Brown Trout Fingerling	929,625 2,954,886	
Big Lake		10,282,500
Muskellunge FryWall Eyed Pike Fry	82,500 10,200,000	
Birchwood	44,550,000	44,550,000
Donle		186,852
Brook Trout Fingerling	48,000 48,180	
Brown Trout Fingerling. Rainbow Trout Fingerling.	95,672	
Burlington.		46,501,708
Wall Eyed Pike Fry Black Bass Fingerling	46,200,000 261,110	
Miscellaneous	40,598	
DeerbrookBrook Trout Fingerling	46,885	46,385
Delafield	105,600	42,901,155
Bluegill Fingerling. Wall Eyed Pike Fry. Black Bass Fingerling. 65,500	41,400,000	
Black Bass Fingerling	65,555	
Perch Fry Pickerel Fry	1,800,000 80,000	
Eagle River		56,700,000
Wall Eyed Pike Fry	56,700,000	
Eau Claire	416,500 147,500	564,000
Brown Trout Fingerling	147,500	
Fishtrap Lake	550,000	8,950,000
Wall Eyed Pike Fry	8,400,000	
Haugen Wall Eyed Pike Fry	68,600,000	68,600,000
Hayward	 	64,580,641
Brook Trout Fingerling Brown Trout Fingerling	188, 196 227, 728	
Brown Trout Fingerling Rainbow Trout Fingerling Black Bass Fingerling Wall Eyed Pike Fry Muskellunge Fry 417,500	98,418 41,275 68,525,000	
Wall Eyed Pike Fry	68,525,000	
Muskellunge Fry	417,524	
Perch Fingerling	87,500	
Hebron	16,275,000	16,275,000
•	10,2.0,000	
Island Lake	1,980,000	25,880,000
Island Lake Muskellunge Fry Wall Eyed Pike Fry	28,400,000	1

Hatchery		Quantity from each Hatchery	Total Number from each Hatchery
Madison			915,420
Brown Trout Fingerling	864,280		\$10,420
Brown Trout Fingerling Brown Trout Yearling Brown Trout (20 Months)	8,400		
Brown Trout (20 Months)	8.140		
Brown Trout Adult	8,140 1,000	876,770	
		0.0,	
Rainbow Trout Fingerling	84,000	l	
Rainhow Trout Yearling	900		
Rainhow Trout (20 Months)	750	85,650	
		1	
Croppie		1,500	
Bluegili		1,500	
		l	i
Osceola	. <b> </b>	<b></b>	1,874,878
Brook Trout Fingerling	796,850 7,970 2,250	ł	1
Brook Trout Yearling	7.970	<del>-</del>	l
Brook Trout (20 Months)	2,250	<b> </b>	l
Brook Trout Fingerling Brook Trout Yearling Brook Trout (20 Months) Brook Trout Adult	18	807,088	
		1	
Brown Trout Fingerling	249,775 9,240	1	1
Brown Trout Yearling	9.240	259,015	1
	-,		
Rainhow Trout Fingerling	272,000		
Rainhow Trout Veerling	84,800		
Rainbow Trout (90 Month)	2,230		
Rainbow Trout Fingerling. Rainbow Trout Yearling. Rainbow Trout (20 Month) Rainbow Trout Adult	240	808,770	
Italibow Trout Addit	240	000,110	
Pine Lake		l .	990,000
Pine Lake		990,000	330,000
Muskenunge Fry		330,000	
Rest Lake Dam		l	15,000,000
Wall Eyed Pike Fry		15,000,000	10,000,000
wan Eyeu Fike Fly		10,000,000	
St. Croix Falls			1,664,915
Brook Trout Fingerling		1,420,200	1,005,510
Drown Trout Flugerling		186,800	
Deinham Manut Vanding	45,920	100,000	
Brown Trout Fingerling Rainbow Trout Yearling Rainbow Trout (20 Month)	11,995	57,915	
Rainbow 1 rout (20 Month)	11,550	37,310	
Sheboygan		ł	10,160,000
Lake Trout Fry		10,160,000	
Date Hout Fry		10,100,000	
Spooner			20,700,000
Spooner Wall Eyed Pike Fry		20.700.000	20,100,000
Wall Dyed I lke Fly		20,100,000	
Sturmon Rev			16,226,000
Sturgeon Bay Lake Trout Fry		9,476,000	10,220,000
Lake Trout Fry Wall Eyed Pike Fry		6,750,000	
Wall Djed I lackly		0,.00,000	
Three Lakes		I	880,000
Three Lakes Muskellunge Fry		880,000	
Westfield		l	769,650
Westfield. Brook Trout FingerlingBrook Trout Yearling	441,200		
Brook Trout Veerling	1,000	442,200	
Dioon Trout Tearing			
Brown Trout Fingerling Rainbow Trout Fingerling		160,200 167,250	
Rainbow Trout Fingerling		167,250	
Wild Rose	875		922,262
Brook Trout (20 Months)			
Brook Trout Adult	80	455	
Description of the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second seco	E17 000	1	1
Brown Trout Fingerling	517,000		1
Brown Trout Yearling	690	517,746	
Brown Trout Adult	56	517,746	
Dalah an Massa Massa Van	904 000	1	
Rainbow Trout Fingerling	826,000		
Rainbow Trout Yearling	540		
Rainbow Trout (20 Months)	2,800	329,061	
Rainbow Trout Adult	<b>22</b> 1	325,001	

Hatchery	Quantity from each Hatchery	Total Number from each Hatchery
Woodruff		58,402,884
Muskellunge Fry	1,285,000	
Wall Eyed Pike Fry         55,500,000           Wall Eyed Pike Adult         159	55,500,159	
Pickerel Fry	660.000	l
Perch Yearling	299,575	
Black Bass Fingerling	149,400	
Bluegill Fingerling 300		
Bluegill Yearling 900	1,200	
Lake Trout Fry	507,500	
Neenah Rescue Operations		888,950
White Bass Fingerling	888,950	
Gills Landing Operations		811,000
Pickerel Fingerling Black Bass Fingerling	282,100 78,900	
	· ·	5 450 A50
Mississippi River Operations		7,478,078
Black Bass	128,169 7,849,909	
Wisconsin River Operations		411.498
Bass	6.665	421,400
Miscellaneous	404,828	
Wolf River Operation	l	216,698
Black Bass	2.448	
Miscellaneous	214,250	
Miscellaneous Rescue Stations		649,060
Black Bass	95,852	
Miscellaneous	558,208	
Total	1	528,245,145

# ADULT TROUT DISTRIBUTION-1935

County	Brook	Brown	Rainbow
Dane. Green. Manitowoc Marathon Marinette Polk Portage.	25 25 80 80 18	500 500 25 8 8	25 8 8 240 180
SawyerShawano	15	15	
Total	118	1,056	461

TROUT DISTRIBUTION TO REARING PONDS AND TANKS—1935

Location	Brook	Brcwn ·	Raint ow
Amherst		8,200	
Barneveld		8,100	900
Beaver Dam		5,400	300
		10,000	
Belleville			
Black Earth		80,000	
Blackwell			17,500
Bloomington		1,000	10,000
Blue Mounds		8,000	
Colfax	20,000	<b></b>	
Cashton	l	20,000	<b></b> . <b>.</b> . <b>.</b>
Cazenovia	l	20,000	
Crivitz	59,000	20,000	*187,20
Cross Plains	1	1,000	
Elderon	15,000	-,,,,,,	
Elmwood	5,000		10,C00
Pennimore	0,000	6,400	10,000
Iudson		50,400	
		50,000	
[ronton		8,080	5,000
[thaca		14,500	
uda		1,000	• • • • • • • • • • • • • • • • • • •
a Farge		80,800	
Lime Ridge		10,000	
Mt. Horeb	<b></b>	20,000	
Manitowoc	<b></b>	22,000	
Martell		5,000	10,000
Menominee		85,000	<b>-</b>
Mineral Point		1.000	
Monroe	11.000	2,400	
Montfort.	11,000	8.000	
Monticello		80,000	
Muscoda	<b></b>	49,000	
	10,000	49,000	
New Richmond	10,000	20,000	25,000 18,000
Viagara		<u></u> -	18,000
Vorwalk		12,500	
Pembine	18,750		19,50
Pine River		106,000	<b></b>
Plainville	4,200	<b></b> .	<b></b>
Platteville		9.240	9,000
ostville		1.500	•
ound	6,000		7,500
rairie du Chien	, ,,,,,	20,000	.,,
Reedsburg		10,000	- · - · - · - · - · - · ·
lichford	1.000	10,000	80,000
	1,000	21,000	80,000
Ridgeway			
axeville		8,000	10,000
heboygan	19,600		5.000
tevens Point		20,000	
toughton		<b></b> .	10,600
Cilleda	15,000		
Vabeno	1,500	<b>.</b> . <i></i>	1,600
Vaupaca		60,000	
Vausau	85,000		
Vhitewater		5.5C0	
Vittenberg	16,200	2,500	
Total	287,250	688,570	188,400
4 Vent	ا ۵۰۰,۰۰۰	000,010	160,40

*Note: Eggs

# FISH RESCUE OPERATIONS Wisconsin River—1935

Distributed	Returned to River	Disposed of
555 5,500 <b>23</b> ,800	6,110 108,900 65,800 4,176	
2,200	180,850 1,550 1,702 445	
1,550 7,500	51,800	58.700
		1,948 68 60,711
	555 5,500 23,800 2,200 55 1,550 7,500	Distributed   River

# FISH RESCUE OPERATIONS Mississippi River—1935

Species	Distributed	Returned to River	Buried
Black Bass	105,760 108,900 18,900	22,409 50 45,839 700	
Croppie Perch	109,000	8,860,202 1,211	••••••
Pickerel Pike Sunfish	2,280 15,900	24,072 1,018 8,664,798	
White Bass		2,049	
Carp			143,186 12,217 5,670 4,108
			968 1,251
Total	855,740	7,122,888	167,840

# FISH DISTRIBUTION SUMMARY—1936

Brook Trout.	2,984,197
Brown Trout	2,622,442
Rainbow Trout	1.510.592
Lake Trout	26,690,300
Wall Eyed Pike	428.140.957
Northern Pike	246.889
Muskellunge.	6.998.870
Black Bass	1.097.558
White Bass	195.854
Rock Bass	5.985
Perch	86.465.998
Cropple	10.128.802
Sunish	1.581.869
Bluegill	5.571.665
Bulihead	8,072,120
Catfish	6.448
Sturgeon	182
Sturgeon	102
Total	572.269,128

# DISTRIBUTION OF FISH BY SPECIES AND SIZE-1936

Brook trout fingerlings (20 month)	2,979,590 4,097	
adult	510	2,984,197
Brown trout fingerlings	2.584.905	
yearlings	28,400	
(20 month)	8,680	
adult	507	2,622,442
Rainbow trout fingerlings	1,466,800	
yearlings	86.800	
(20 month)	7,855	
adult	187	1.510.592
Lake trout fry	26,690,800	26,690,300
Dake trout iry	20,090,000	20,050,500
Wall eyed pike fry	428,000,000	
fingerlings	25,457	
yearlings	106,808	
adult	8,692	428,140,957
Muskellunge fry	6,997,000	
(8 to 10 inches)	1,870	6,998,870
Perch fry	85,225,000	
fingeriings	787,821	
yearlings	877,888	
adult	125,289	86,465, <b>99</b> 8
Croppie fry	8,184,787	
fingerlings	1.408.607	
adult	589,908	10,128,802
Bluegill fry	4,516,900	
	618,581	
fingerlingsyearlings	246,200	
adult	189,984	5,571,665
Dia da bara da arateran	011 000	
Black bass fingerlings	911,220 118,184	
yearlingsadult	78.199	1,097,558
<b></b>	10,100	1,001,000
Rock bass fingerlings	750	
adult	5,185	5,985
White bass fingerlings	188,984	
adult	11,420	195,854
Sunfish fingerlings	1,140,198	
adult	891.676	1,531,869
		_,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Bullhead fingerlings	2,206,674	
yearlings	124,760	0 000 100
adult	740,686	8,072,120
Northern pike fingerlings	199,798	
adult	46,596	246,389
Catfish fingerlings	4,886	
adult.	1,612	6,448
	•	•
Sturgeon adult	182	132
Total		572,269,128

# FISH DISTRIBUTION BY HATCHERIES-1936

Hatchery	Quantity from Each	Total Number from Each
Пакспету	Hatchery	Hatchery
Bayfield		6,117,080
Brook trout fingerlings 986,490 Brook trout adult 282	986,722	
Brown trout fingerlings 911,800 Brown trout adult 258	912,058	l
	1	
Lake trout fry	4,218,800	
Big Lake	<u>-</u>	8,217,500
Wall-eyed pike fry	7,200,000 1,017,500	
- ·	1,,,,,,,,,	
Birchwood_ Wall-eyed pike fry	48,200,000	48,200,000
	40,200,000	
BruleBrook trout fingerlings	8,575	8,575
	0,010	
Burlington	22,050,000	78,891,950
Perch fry	51,625,000	
Perch fry Black bass fingerlings Bluegill fingerlings	51,625,000 202,850	
Bullhead fingerlings	9,150 4,950	
• •	· ·	
DeerbrookBrook trout fingerlings	1,500	1,500
	-,	
Delafield	88,400,000	72,248,250
Perch fry	88,600,000	
Black bass fingerlings Bluegill fingerlings	219,000	
	24,250	
Eagle RiverWall-eyed pike fry	81,500,000	81,500,000
wan-eyed pike iry	81,500,000	
Eau Claire		84,425
Brook trout fingerlings Rainbow trout fingerlings	56,875 27,550	
· ·		
Fish Trap Lake - Eggs sent to Big Lake Hatchery for Hatching—		
Eggs sent to Big Lake Hatchery for Hatching— 21 qt. wall-eyed pike eggs;	1	
18 qt. muskellunge eggs.		
Haugen		66,658,520
Wall-eyed pike fryBluegill fry	68,000,000 1,826,760	
Bluegill fry Crappie fry	1,826,760 1,826,760	
Hayward		94,026,657
Brook trout fingerlings	52,250 188,255	
Brown trout fingerlings	188,255 191,100	
Wall-eved pike frv	89,700,000	
Muskellunge fry 274,500 Muskellunge fingerlings 55	274,555	
Bluegill fry 2,690,140	28,185	
Bluegili fingerlings 2,690,140	2,774,615	
	l ' '	1
Crappie fry	827,747	
High Falls Rearing Station (Peshtigo River)		150,000
Brown trout fingerlings	125,000 25,000	
· · · · · · · · · · · · · · · · · · ·		00 640 000
Island Lake	21,000,000	28,640,000
Wall-eyed pike fry Muskellunge fry	2,640,000	1

Hatchery	Quantity from Each Hatchery	Total Number from Each Hatchery
Lakewood	897,150	897,150
Madison	.50	854,862
Brown trout yearlings		
Rainbow trout yearling 7,5 Rainbow trout adult 1	50 22 7,672	
Mercer	17,400,000	28,155,280
Muskellunge fry Crappie fry	275,000	
Osceols	00	959,565
Brook trout adult	10 429,510	
Brown trout fingerlings		
Rainbow trout fingerlings       321,0         Rainbow trout yearlings       5,8         Rainbow trout (20 months)       3,0	00	
Pelican Lake Eggs sent to Mercer hatchery for hatching 56 qts. wall-eyed pike eggs ½ qt. muskellunge eggs Pine Lake		9,770,000
Wall-eyed pike fry Muskellunge fry		
Rest Lake Dam Wall-eyed pike fry Muskellunge fry	18.000.000	19,480,000
St. Croix Falls Brook trout fingerlings	1,267,500	1,267,500
Sheboygan Lake trout fry	9,186,000	9,186,000
Spooner	15,800,000	15,800,000
Sturgeon Bay Lake trout fry	18,248,000	13,248,000
Thunder River Rearing Station  Brown trout yearling  Rainbow trout yearling	15,000	85,000
Westfield		414,687
Brook trout (20 months)		
Brown trout (20 months)	2,680	
Rainbow trout (20 months) 4,8	225,810	
Wild Rose	18	1,128,592
Brown trout fingerlings	00	
Brown trout adult	9 887,109	

Hatchery		Quantity from Each Hatchery	Total Number from Each Hatchery
Wild Rose—Continued Rainbow trout fingerlings. Rainbow trout yearlings. Rainbow trout adult.	288,500 2,950 15	286,465	
Woodruff Lake trout fry Wall-eyed pike fry Wall-eyed pike fingeriings	47,250,000 550	88,000 47,250,550	48,060,865
Muskellunge fry	590,000 1,815	591,815	
Black bass fingerlings  Gills Landing Rescue Operations		180,500 48,000	108,000
Black Bass fingerlings Northern pike fingerlings Neenab Rescue Operations		60,000	149,670
White bass fingerlings		160,798	4,629,025
Wall-eyed pike fingerlings	9,156 8,051	12,207	
Northern pike fingerlings	16,815 5,605 18,879	22,420	
Perch fingerlings Perch adult  Croppie fingerlings	1,096,580	18,505	
Croppie adult	951,526 817,175	1,462,106	
Bluegill fingerlings.  Bluegill adult.	62,925 20,975	88,900	
White bass fingerlings	21,551 7,188 1,175,828	28,784	
Bulihead adults  Catfish fingerlings  Catfish adult	2,918 971	1,567,770	
DeSoto pond distribution  Black bass (adult)  Perch (adult)  Crapple (adult)  Bluegill (adult)  Bullhead (adult)	•••	1,856 1.856	135,600
Bass Lake Rescue Operations Black bass fingerlings Black bass yearlings Black bass adult	1,280 610 40	1,980	1,980
Land O' Lakes Rescue Operations.  Perch (adult)  Rock base (adult)		18,165 4,985	28,100

Hatchery		Quantity from Each Hatchery	Total Number from Each Hatchery
Sweeney Lake Rescue Operations			785,981
Wall-eyed pike yearlings	106,808 891	107,199	
Black bass yearling	460 000	111,994	
Perch yearlings	460,000 106,788	566,788	
Wisconsin River Rescue Operations			920,045
Black bass singerlings	19,607 6,585	26,142	
White bass fingerlings White bass adult	5,218 1,787	6,950	
Wall-eyed pike fingerlings Wall-eyed pike adult	14,581 4,860	19,441	 
Northern pike fingerlings Northern pike adult	2,268 755	8,028	
Perch fingerlings	11,625 8,875	15,500	
Crappie fingerlings	103,950		
Crappie adult Sunfish fingerlings	86,475 28,825	188,600	
Sunfish adult	28,825 292,519 97,506	115,800	
Bullhead adult		890,025	
Bluegill adult	158,750 51,250 48	205,000	
Catfish adult	16	64	
Wolf River Distribution (Phlox)	6,550		714,285
Black bass yearlings	580 21,857	28,487	
Perch yearlings Perch adult	271,100 18,162	284,262	
Sunfish adult	046 000	11,612	
Bluegill yearlingsBluegill adult	246,200 19,014	265,214	
Bullhead yearling		124,760	
Miscellaneous Rescue Operations  Black bass fingerlings	144,699		2,424,539
Black bass adult	8,712	148,411	
Bluegill fingerlingsBluegill adult	284,081 94,677	878,708	
Builhead fingerlings Builhead adult	788,877 244,458	977,885	
Crappie fingerlings	208,077 67,692	270,769	
Northern pike fingerlings	120,710 40,286		l

Hatchery		Quantity from Each Hatchery	Total Number from Each Hatchery
Miscellaneous Rescue Operations—Continued Perch fingerlings Perch adult	252,817 84,105	886,422	
Rock bass fingerlings Rock bass adults	750 250	1,000	
Sunfish fingeriings Sunfish adult	102,192 84,064	186,256	
Wall-eyed pike fingerlings Wall-eyed pike adult	1,170 890	1,560	
Catfish fingerlings Catfish adult	1,875 625	2,500	 
White bass fingerlings	7,500 2,500	10,000	
Sturgeon adult		182	
Total			572,269,128

# ADULT TROUT DISTRIBUTION-1936

Hatchery	Brook	Brown	Rainbow	Total
Bayfield	282	258 240	122	490 <b>362</b> 110
Westfield_ Wild Rose	150 18	9	15	150 42
Total	510	507	187	1,154

# TROUT DISTRIBUTION TO REARING POND AND TANK-1936

Hatchery Received From	Brook Trout	Brown Trout	Rainbow Trout	Total
Bayfield	26,500 10,500 62,800	22,500 109,200 21,800	8,950 26,500 15,200 160,000	22,500 118,150 74,300 10,500 77,500 297,100
Total	99,800	290,100	205,650	595,050

# FISH RESCUE OPERATIONS

Species of Fish Rescued	No. Distributed
Wall Eyed Pike	140.40
Northern Pike	
Black Base	
White Bass	
Rock Bass.	
Perch	
Prappie	
unfish	
Bluegill	
Bullhead	
Catfish	
Sturgeon	
Total	9.887.17

# FISH RESCUE OPERATIONS Mississippi River—1936

Species	Distributed	Returned to River	Disposed of
Black Bass	112,600	48,198	
Bluegill	67,760	16,140	
Bullhead	121,900	1,445,870	
Catfish		3.884	
Crappie	49.560	1.412.546	
Perch		18.505	
Pickerel		22,420	
Pike	875	11.832	
Sunfish	27.900	1.240.801	
White Bass		28,784	
Carp			85.870
Dogfish			50.415
			28.970
Sheepshead			887
Total	880,095	4,248,980	110,642

# FISH RESCUE OPERATIONS Wisconsin River—1936

Species	Distributed	Returned to River	Disposed of
Black Bass	6.600	19.542	
Bluegill	82,000	178,000	
Builhead	35.825	854,200	
Catfish		64	
Crappie	20.800	117.800	
Perch		15.500	
Pickerel	1.865	1,658	
W. E. Pike	1.080	18,361	
Sunfish	27,800	87,500	
White Base	500	6,450	
Carp			50.316
			1.072
			99
· · · ·			
Total	128,970	794,075	51,487

Note: 84,800 Suckers returned to river.

# **GAME**

# DISTRIBUTION OF GAME BIRDS AND EGGS

Birds and Eggs	1984-85	19 <b>35-36</b>
Mature Pheasants (English Ring-neck, Mongolian and Mutant)	7,208	8,685 5,714
Day-old Pheasant Chicks Missellaneous Birds (Partridge, Quail, Prairie Chicken, Wild Turkey, and Bantams) Game Bird Eggs. Wild Turkey Eggs.	1,210 96,456	704 75,454 191

# INVENTORY OF STOCK ON HAND-JULY 1, 1936

ame Farm: Mature Pheasants, Hungarian and Chukar Partridge, and Miscellaneous Game Birds.	44
Game Birds, 1986 hatch—pheasants of all varieties	11.42
Chukar and Hungarian Partridge	26
Wild Turkeys	10
'ur Farm:	
Black Raccoon	57
Cross and Gray Raccoon.	ŭ,
Silver, Cross, and Blue Fox.	
Red Fox.	
Mink.	
White-tailed Deer	
Winter-under Deer	
Karakul Sheep Miscellaneous game and fur-bearing animals (Fisher, Marten, Otter,	•
Beaver. etc.)	1

# TOTAL ESTIMATED GAME KILL FOR 1934 AND 1935 (Based on Game Census Tabulation)

·			•	
	1984		1985	
Cotton-tail rabbits	1.728.280		1,429,192	
Snowshoe rabbits			178.846	
Jackrabbits		2.059.969	17.605	1.625.648
***************************************		2,000,000		1,000,000
Gray squirrels	649,698		745,878	
Fox squirrels			428.448	
Red squirrels		1.156.970	148,888	1,823,209
red squirtes	140,341	1,100,510	110,000	1,020,200
Gray fox	14.914		19,575	
Red fox		18,048	4.288	23.863
1000 104	0,104	10,010	7,200	20,000
Bobcat		. 888		298
Ruffed grouse		. 000	72.778	
S. T. grouse & Pr. Chicken		203.801	88.476	106,254
D. I. groupe to II. Onicaes	12,000	200,001		200,200
Woodcock		8,217		2.789
Rail		472		241
Jacksnipe		86,706		17.448
Canada goose	765	00,100	598	
Blue goose.			105	
Snow goose			295	
Other geese		1,418	100	1.098
Other geese	110	1,410	100	1,000
Mallard	128,288		167.693	
Black duck	12.864		14,787	
Green-winged teal	42.261		22,602	
Blue-winged teal	84.048		18.409	
Pintail	21.199		14.724	
	11.902		8.668	
Widgeon	16.849		19.887	
	5.884		9.496	
Redhead				
Bluebill	66,882		121,969	
Coot.	223,294	700 F01	172,184	FOA 850
Other ducks	7,055	569,521	10,895	580,759
Other mane		9,491		1.854
Other game				8,889
Raccoon		6,552		
Opossum		6,664		5, <b>306</b>
Pheasant		108,640		185,717
Hungarian partridge		22,181		23,252
Bobwhite quail		12,496		10,848
Total est, kill all species		4,211,479		8,867,468

# TRAPPING STATISTICS

Animal	1934–35 Season Pelts Taken	1985–86 Season Pelts Taken
Muskrat Beaver	1,809	116,597 5,747
Mink Raccoon Skunk		5,841 885 10,195
Weasel		10,855 1,045 758
Otter _ Badger	158 595	109 107 168
Wildcat (or Bobcat)	108	72

# WILD LIFE AND GAME REFUGES, WATERFOWL REFUGES, AND SANCTUARIES—JULY 1, 1936

Name	County	Acreage
shland County Game Refuge (deer)	Ashland.	7,6
opper Falls State Park	Ashland	1.0
ake Owen Wild Life Refuge (deer)	BayfieldBuffalo	1,0
derrick State Park	Buffalo	2
nerrick State Park. iranton Legion Wild Life Refuge. Iniversity Bay Wild Life Refuge. oxhall Wild Life Refuge.	Clark Dane	6
orbeit Wild Life Defuge	Dane	2
Iarker Wild Life Refuge	Dane	ã.
dendota State and Memorial Hospital		-
Game Refuge	Dane	5
ake Wingra Game Refuge (water area)	Dane	2
lots Refuge eninsula State Park	Door	2,2 8,4
otawatomi State Park	Door	1,0
attison State Park	Douglas	î,ĭ
Brule River Game Refuge (deer)	Douglas.	1.5
Vilson Wild Life Refuge	Dunn and St. Croix	1 2
lorence County Game Refuge (deer)	Florence	4,9
foon Lake Game Refuge	Fond du Lac	Z,Z
foon Lake Game Refuge amp Byron Wild Life Refuge	Fond du Lac	1,0
orest County Game Refuge (deer)	Forest	1,8
rgonne Game Refuge (deer)	Forest	46,0
rgonne Game Refuge (deer)	Grant	1,6
leison Dewey Farmstead	Grant	7
ake Puckaway Game Refuge (water area)	Green Lake	5
Association Country Club Came Sanctuary	Green Lake	1
Assecutin Country Club Game Sanctuary Ower Hill State Park ron Country Game Refuge (deer) Blue Spring Lake Wild Life Refuge	Iowa	•
ron County Game Refuge (deer)	Iron	10,2
liue Spring Lake Wild Life Refuge	Jefferson	4
locky ardor kososide park	Juneau and Sauk	2
Incle Joe's Wild Life Refuge	Kewaunee	1,4
Craftwood Refuge	Lafayette	9
Corning State Game Refuge (deer)	Langlade	15,8
Manitowoc County Fish and Game Pro-		
tective Association Wild Life Refuge No. 1	Manitowoc	5
fanitowoc County Izaak Walton League Wild Life Refuge No. 1	Manitowoc	6
Rih Mountain State Park	Marathon	ž
saak Walton Game Preserve Headquarters House Wild Life Refuge (deer) White Rapids Wild Life Refuge	Marathon	9
Ieadquarters House Wild Life Refuge (deer)	Marinette	1,4
White Rapids Wild Life Refuge	Marinette	2,1
Silver Cliff Game Refuge (deer)	Monroe	2,8
Valley Farm Refuge Archibald Wild Life Refuge (deer)	Oconto	8,4
aldron Falls Wild Life Refuge	Oconto	,,,
forgan Wild Life Refuge	Oconto	•
aldron Falls Wild Life Refuge Morgan Wild Life Refuge Firee Lakes Game Refuge (deer) Lake Julia-Whitefish Wild Life Refuge	Oneida	2,4
aurie Lake Game Refuge	Oneida	1,0
merican Legion State Forest Game Refuge	Oneida	1,0
(deer)	Oneida	4,4
Chousand Islands Game Refuge	Outagamie	
Celulah Park Game Refuge	Outagamie	
eluiah Park Game Refuge kandali Fox Farm Sanctuary darth Boyd Game Sanctuary Ellington Wild Life Refuge	Outagamie	
Ellington Wild Life Refuge	Outagamie	1,6
aird Wild Life Refuge	Outagamie	ī, č
Baker Wild Life Refuge	Outagamie	- 7
horecliff Wild Life Sanctuary	Ozaukee	
nterstate Park	Polk	10
Poot Piver Wild Life Refuge	Price	18,0
ailor Lake Game Refuge (deer)	Richland	1,1
Overcrest Refuge	Rock	1,1
Overcrest Refuge. St. Croix Reserve No. 1	St. Croix	
Devil's Lake State Park	Sauk	1,
Potter's Game Refuge	SaukSawyer	
Round Lake Game Refuge Djibwa Wild Life Sanctuary	Sawyer	4

# WILD LIFE AND GAME REFUGES, WATERFOWL REFUGES, AND SANCTUARIES—JULY 1, 1936—Continued

Name	County	Acreage
Sawyer County Game Refuge (deer)	Sawyer	8,44
Beneca Wild Life Refuge (deer)	Shawano	1,08
Kohler Game Refuge	Sheboygan	2,20
Ferry Andrae State Park	Sheboygan	9
Pigeon River Wild Life Refuge	Sheboygan	1,26
North Branch Game Refuge	Sheboygan	1,42 2,10
Forest Preserve Refuge	Sheboygan	9.60
Taylor County Game Refuge (deer) Perrot State Park	Trempealeau	1.01
Frout Lake Game Refuge (deer)	Vilas	23.00
St. Germain Wild Life Refuge	Vilas	25,00
Little Twin Lake Wild Life Refuge (deer)	Vilas	1.00
Constance Lake Reserve (deer)	Vilas	1.16
Forest Lake Wild Life Refuge (deer)	Vilas	1.16
Clear Crooked Lake Game Refuge (deer)	Vilas	8.80
Rock Prairie Wild Life Refuge	Walworth	64
Washington County Wild Life Refuge	Washington	1.44
amp Minikani Wild Life Refuge	Washington	18
Cushing Memorial State Park	Waukesha	
abst Farms Wild Life Sanctuary	Waukesha	5
Red Brae Farms Wild Life Refuge	Waukesha	50
rooked Lake Wild Life Refuge	Waukesha	63
Northern Hospital Game Refuge	Winnebago	65
Winchester Wild Life Refuge	Winnebago	80
ake Biron Wild Life Refuge (deer)	Wood	1,65
Fri-City Wild Life Refuge (deer)	Wood	3,50

# PENDING GAME REFUGES—JULY 1, 1936

# DEER

Ashland Ashland Ashland Bayfield Bayfield	2,250 720 1,000 2,240 8,960
Ashland	1,000 2,240 8,960
AshlandBayfieldBayfield	2,240 8,960
BayfieldBayfield	8,960
Bayfield	
	2,88
	2,04
Bayfield	1,90 2.04
	5.80
	8.52
	5.88
	4.04
	1.92
	4.50
Iron	10.24
Iron	11,50
	7,28
Langlade	8.52
Lincoln	6,64
Lincoln	5,88
Marinette	3,68
1	
	2,40
	5,76
	5,00
	2,76
	8,60
	16,54
	4,82 2.88
	2,56
	4.00
	3.36
	2.92
Sawyer & Revfield	5,40
Taylor	5.68
	47
	1.98
	7.68
	Bayfield Clark Clark Douglas Douglas Douglas Douglas Iron Iron Langlade Lincoln Lincoln

# PENDING DEER REFUGES

Name	County	Acreage
Spring Brook Wild Life Refuge	Ashland	2.1
ron River Wild Life Refuge	Ashland.	- 6
Morse Wild Life Refuge	Ashland	1.6
Ding Dong Wild Life Refuge	Ashland	2.13
Hungry Run Wild Life Refuge	Ashland	1.7
Red Cedar Wild Life Refuge	Barron	5.00
ndian Springs Wild Life Refuge	Bayfield	2.90
Delta Wild Life Refuge	Bayfield	4.84
North Drummond Wild Life Refuge	Bayfield	1.88
Namekagon Wild Life Refuge	Bayfield	2.6
Blaine Wild Life Refuge	Burnett	8,00
Brule River Wild Life Refuge	Douglas.	24,90
Spruce River Wild Life Refuge	Douglas	5.89
Mishe Mokwa Wild Life Refuge	Douglas.	3,20
Woods Creek Wild Life Refuge	Florence	10,50
Popple River Wild Life Refuge	Forest	8,81
ine Creek Wild Life Refuge	Forest.	8,20
Tyler Forest Wild Life Refuge	Iron.	14,00
sland Lake Wild Life Refuge	Iron	8,96
Hunting River Wild Life Refuge	Langlade	8.50
anglade County Wild Life Refuge	Langlade	2.50
Newwood Wild Life Refuge	Lincoln	15.86
Town of Wilson Wild Life Refuge	Lincoln	2.56
Iarrison Wild Life Refuge	Lincoln	18.44
eshtigo River Ranch Wild Life Refuge	Marinette	6.16
Chunder River Wild Life Refuge	Oconto	6.28
Minocqua Wild Life Refuge	Oneida	5.76
Robbins Wild Life Refuge	Oneida	4,44
McKinzie Creek Wild Life Refuge	Polk	5,12
Rice Creek Wild Life Refuge	Polk	3,84
Iay Creek Wild Life Refuge	Price	2.76
ailor Creek Wild Life Refuge	Price	1.92
enroot Wild Life Refuge	Sawyer	5,12
ost Land Wild Life Refuge	Sawyer	8,07
Moose Rivers Wild Life Refuge	Sawyer	8,89
og Creek Wild Life Refuge	Sawyer	1,70
Vinter Wild Life Refuge	Sawyer	4,80
Beaver Creek Wild Life Refuge	Taylor	6,84
helps Wild Life Refuge	Vilas	7,26
Rommeles Wild Life Refuge	Vilas	4,40
Rommeles Wild Life Refuge	Vilas	
		87.97
Unit No. 2		5,86
		8,59
Unit No. 4		4,58
pider Lake Wild Life Refuge	Vilas	64
pider Lake Wild Life Refuge	Vilas	40
	-	200.00

# WINTER FEEDING CONTEST WINNERS-1934-1935

# FIRST CLASS

Rating	County	Organization	Address	No. of Points	Prise
# #@@##	Barron. Watapaca. Portage Dane. Brown.	Barron County Conservation Club. Waupaca County Conservation League. Portage County Izaak Walton League. Bane County Sportsmen's League. Brown County Hunting & Fishing Club. Calumet County Sportsmen's Club.	Barron. Waupaca. Stevens Point Gif State St., Madison. Green Bay.	1, 128 667 602 479 878	100 Mongolian Phessants 75 Mongolian Phessants 75 Mongolian Phessants 60 Mongolian Phessants 80 Mongolian Phessants
		SECOND CLASS	LASS		
# 110040	Kenosha St. Croix Sheboygan Barron Kewaunee	Kenceha County Conservation Club. St. Groix Red and Gun Club. Spring Farm Rearing Club. Cumberiand Rod and Gun Club. Kewaunee County Hunting & Flahing Association. Muscoda Sportsmen's League.	809 75th St., Kencaha 815 Third St., Hudson. 1086 Union Ave., Sheboygan. Cumberland. Kewaunee	542 628 454 199	75 Mongolian Pheasants 76 Mongolian Pheasants 60 Mongolian Pheasants 80 Mongolian Pheasants 20 Mongolian Pheasants
		THIRD CLASS	LASS		
-004b	Polk Polk Marathon Polk	Osceola Rod & Gun Club Amery Sportsmen's League Mosinee Sportsmen's Club. Dresser Junction Rod & Gun Club Milltown Rifle Club.	Osceola. Amery Mositese Junction Dresser Junction	248 248 240 180 149	60 Mongolian Phessants 40 Mongolian Phessants 80 Mongolian Phessants 20 Mongolian Phessants 16 Mongolian Phessants

*Duplicate awards.

# WINTER FEEDING CONTEST WINNERS-1936-1936

# FIRST CLASS

Rating	County	Organization	Address	No. of Points	Prize
-	Kenosha	Kenosha County Conservation Club, Inc.	Kenoshs	8,889	50 Mongolian Pheasants
# 61 82 44 70 81	Douglas Calumet Racine Green	Douglas County Fish & Game Protective League Calumet County Sportamen's Club. Racine County Conservation League Marice County Rod and Gun Club.	Superior Brillion Racine Monroe	1,898 921 841 286	20 Hungarian Partridge 76 Mongolian Pheasanta 60 Mongolian Pheasanta 40 Mongolian Pheasanta 90 Mongolian Pheasanta 90 Mongolian Pheasanta
•		-	-		
1	St. Croix	St. Croix Valley Rod and Gun Club	Hudson	197	40 Mongolian Pheasants
* 900400	Washington Juneau Marathon Kewaunee	Washington County Fish & Game Protective Assn. New Lisbon Community Conservation Association Mian Red and Gun Club Kewamee County Hunting & Fishing Association Receisburg Outdoor Club	West Bend. New Lisbon Milan Kewannee Reedsburg.	195	20 Chukir Partinge 60 Mongolian Phessants 50 Mongolian Phessants 85 Mongolian Phessants 25 Mongolian Phessants 20 Mongolian Phessants
		THIRD CLASS	LASS		
1	Sheboygan	Spring Farm Rearing Club	Sheboygan	741	80 Mongolian Pheasants
* * * * 04004000-000	Dodge Dunn Dunn Dodge Monroe Jeferson Outaganie Taylor	Lowell Rod and Gun Club Boyceville Rod and Gun Club Wilson Creek Valley Rod and Gun Club Astico Rod and Gun Club Norwalk Rod and Gun Club Isaak Walton Chapter. Junior Fish & Game Association. Taylor County Conservation Club	Lowell Boyceville Rnapp Astico Norwalk Watertown Hortonville Medford	256 1198 1184 1188 1284 1284 1284 1284 1384 1384 1384 1384 1384 1384 1384 13	O COURAT PRESENT SO MORGOIAN PRESENT SO MORGOIAN PRESENT SO MORGOIAN PRESENT 10 MORGOIAN PRESENT 10 MORGOIAN PRESENT 10 MORGOIAN PRESENT 10 MORGOIAN PRESENT 10 MORGOIAN PRESENT 10 MORGOIAN PRESENT

*Special awards
First class-200 or more members
Second class-100 to 199 members

# LAW ENFORCEMENT

# **SEIZURES—1934–1935**

Article	Number Seized	Number Sold	Proceeds From Sale	Other Dispositions
AUTOMOBILES Chev. Coach	1 1 1 1 1 1	1 1 1	\$ 175.00 55.00 55.00 26.70 25.00	To Tomahawk Holding Returned Using
DEER Carcasses	798	726	8,797.48	19 Not saleable 46 Destroyed 2 Stolen
Parts of Deer Venison  Heads Hides Live Deer	1878 lbs.  7 41 1 26	1065 lbs. 1 40 1	244.58 161.14 .50 20.25 1.00	156 lbs. not saleable 157 lbs. Destroyed 6 Holding 1 Destroyed 1 To Game Refuge 19 To Game Farm
Box Venison Jars Venison ELK	1 42	1	7.75	4 To Fox Farm 1 To U. S. F. S. 1 To CCC  Destroyed
Elk	2	2	99.46	
FISH Commercial Game	5048 lbs. 8480 lbs. 1629	5048 lbs. 8278 lbs.	860.55 270.18	128 lbs. Destroyed 29 lbs. Not saleable
	Fish	1487	120.47	84 Not saleable 82 Destroyed 1 Mounted 14 Returned
Rough Fish	90 lbs.	50 lbs.	1.25	11 Released 20 lbs. Destroyed 20 lbs. Not saleable
Sturgeon EggsFISHING EQUIPMENT	18 qts.			18 Destroyed
Nets.	108	2	5.50	64 Destroyed 85 Held 2 Not saleable
Reels	8 4 50	8 8 41	1.25 8.25 125.25	1 Held 7 Returned 2 Held
Baits	9 9	9	4.50	1 Destroyed
Set LinesSpears	85 15	18 2	10.87 10.50	8 Held 72 Destroyed 1 Returned 4 Destroyed 8 Holding
Fish Traps	55			28 Destroyed 27 Holding
Minnow Traps	7 40			7 Destroyed 87 Destroyed
Tackle Box	6 5	4	14.50	8 Holding 2 Holding 1 Using 4 Holding

# SEIZURES-1934-1935-Continued

Article	Number Seized	Number Sold	Proceeds From Sale	Other Dispositions
FUR ANIMALS Beaver	446	484	\$5,078.57	1 Holding 2 Destroyed
Ferrets	5			9 Minn. 4 Destroyed
Fox	17	7	74.75	1 Game Farm 1 Holding 9 live to Game Farm
Mink Muskrat	45 554	45 541	212.50 502.75	12 Returned
Opossum	10	1	.25	1 Destroyed 9 Returned
Otter	4	.4	56.64	
RabbitsRaccoon	19 88	17 85	2.00 99.87	2 Destroyed 20 To Game Farm 10 Released 2 Returned
Skunk	48	40	22.90	14 Not saleable 2 Holding 1 Released
			1	2 Lost
Squirrel Weasel Coyote	50 14 2	89 14	4.75 8.00	11 Not saleable 1 Held
Wolf	2	2	8.00	1 Destroyed
GAME ANIMALS :				
Carcasses Hides Bear Cubs	5 3 9	5 2	44.21 8.00	1 Held 9 To Game Farm
GAME BIRDS Upland Birds	82	62	80.85	9 Destroyed 11 Not saleable
Waterfowl Duck	2			1 Destroyed
Goose	1			1 Released 1 To West Bend
GUNS				
PistolsRifles	148	88 88	8.00 1,136.25	19 Returned 1 Not For Sale
Shot Guns	128	116	1,287.81	45 On Hand 2 To Game Farm 1 Wild Rose H. 4 Returned
Shell Belt	1	l i	1.00	4 recurned
Gun Cases	8	8	5.00	
Gun RodBox Cartridges	1 1	1	.15	On Hand
MISCELLANEOUS Boats	15	1	10.00	2 Returned 6 Using 6 Held
Boat Hook	1	1	.25	
Pair Oars	1 2			1 Held 1 Using 1 Held
Caviar	1 Cse	1	11.00	l
Christmas Trees	l 12	l		Not saleable
Dogs	9	1 1	92.08 10.00	5 Killed
Eagle	8	2	1.25	1 Held
lantern	14	8	2.25	5 Using 6 Held
Carbid Light Still & Moon	1 1			1 Destroyed To Sheriff

# SEIZURES—1934—1935—Continued

Article	Number Seized	Number Sold	Proceeds From Sale	Other Dispositions
MISCELLANEOUS—Cont. Hunting Knife Pail Battery	4 1 2	4	\$ 4.25	1 Returned 1 Held
Ski	1 pr. 1 pr. 2 2	1 1	1.00	1 To Oshkosh 2 Photo Section
TipupsTraps	692	890	48.28	2 Holding 800 Held 2 Not saleable
Bear Traps Suit Case Packsack	2 1 2			2 Held In Office Held

# SEIZURES-1935-1936

Article	Number Seized	Number Sold	Proceeds From Sale	Other Dispositions
AUTOMOBILES				
1981 Chay Course	1	1	\$ 66.00	<b></b>
1981 Chev. Coupe Ford Coach	i	i	20.00	
Hun Goden	i	†	25.00	
Hup. Sedan Chev. Truck	î		20.00	Returned
DEER				
Carcasses	182	159	1,952.12	14 Destroyed 9 Not saleable
Venison Canned Venison	1200 lbs.	898	179.21	802 Destroyed
Hides	96 cans 54	40 41	1.60 21.50	56 Destroyed 2 Destroyed 11 Held
Weeds	E	4	0.75	11 Held 1 Held
Mounted Head	5 1	li	2.75 10.00	1 meta
Head and Hide	2	2	2.50	
Pr. Antiers	ĩ	ĩ	1.00	
Live	25			25 To Game Farm
FISH				
Commercial	7427 lbs. 8548 lbs.	7829 lbs. 2085 lbs.	546.87 295.45	98 lbs. Not saleable 854 lbs. Not saleable
Game			230.40	1104 lbs. Destroyed
	4857 Fish	4005 Fish	248.64	841 Destroyed
Caviar	1 bx.	1	8.00	11 Not saleable
FISHING EQUIPMENT				
Nets	75	1	.50	21 Destroyed 53 Held
Rods and Reels	84	68	177.17	4 Returned 17 Held
Rods, Reels, & Bait	7	7	85.60	
Seines	5	- <i>-</i>		4 Held 1 Minn. Warden
Set Lines	24	1	.75	4 Held 19 Destroyed
Spears	17	1	.97	18 Destroyed 8 Held
Fish Traps	86	8	1.00	83 Destroyed
Fish Traps  Miscellaneous—including poles, creels, ice chisels,				
etc	80	2	.75	24 Held 4 Destroyed
FUR ANIMALS				
Beaver	218	198	\$2,202.67	12 Held 8 Destroyed
			1	1 kit., No sale
Ferrets	5			1 kit., No sale 4 To Harrisburg, Ill. 1 Public Museum
				2 Destroyed 2 Game Farm
Fox	18	8	82.50	3 Game Farm
			02.00	9 Held
				1 Not saleable
				2 Kewaunee County Park
Mink	64	52	852.57	10 Held 2 Game Farm
Muskrat	1417	1051	1,208.89	862 Held
				1 Destroyed 8 Released
Opossum	1			l I Held
Otter	8	2	88.16	2 Held
Rabbits	71	26	.50 79.78	4 Destroyed 20 Game Farm
reaccoon	71	20	19.18	14 Released
Skunk.	52	48	80.45	11 Held 4 Held
Weasel	ĭī	9	2.85	2 Held
Weasel Karakul	8	8	6.00	
ritch	27			27 Held
Wolf	2	2	8.00	

# SEIZURES—1935—1936—Continued

Article	Number Seized	Number Sold	Proceeds From Sale	Other Dispositions
GAME ANIMALS				
Bear Carcasses Hides	8 4	8	\$ 20.54 4.00	1 Held
Bear Meat Live Coyote	7	5	8.00 185.22	2 To Game Farm 1 To Game Farm
GAME BIRDS	_			
Upland	108	95	87.99	12 Destroyed 1 Game Farm
Waterfowl	16	8	2.00	10 Destroyed 3 Public Museum
GUNS Rifles	158	81	850.70	69 Held 1 Returned 1 Game Farm 1 Destroyed
Shot guns	108	62	667.75	88 Held 2 Returned 1 Game Farm
Telescope Sight Cartridges and Shells	1 4	1 8	15.00 .15	1 Held
MISCELLANEOUS Boats	19			15 Held 2 Destroyed 1 To Woodruff H.
Boat and Motor	1 1			1 To Woodrui H. 1 To Minn. Warden Stolen 1 Held
Christmas Trees	8000 lbs.	6	1.25	Not saleable
Decoys	12 18	10	5.00 92.50	1 Destroyed 2 Held 7 Killed 2 Held
Ravens Eagles Lambs	2 2 2	2	2.00	2 To Game Farm 2 Destroyed
Flash lights, headlights, battery	14	4	2.00	2 Using 1 Photo Section
Johnson Motor Traps Hatchets and cooking	788	247	20.00 26.95	7 Destroyed 586 Held
utensils, pails		4	2.50	1 Using 1 Held
Snares Hunting Knife Hunting Coat	1	1	1.00	7 Held
Wool.	82 lbs.	82 lbs	6.60	1 11eid

# INDIVIDUAL WARDEN RECORDS-1934-1935

	District	Causes	Won	Lost	Fines	Sentence (Days)	Costs	Seizures		Fees
Regular Conservation Wardens										
Adamski, John F. Apel, Edward	Sparta Eau Claire	1,18	112	<b>→</b> ∞	\$ 125.00	88	\$ 69.81	22	•	80.63 5.00
Apel, Harold B. Baie, Arthur	Menomonie	~ <b>3</b>	- 82	11	200.00	09	449.90	23:		122.90
Button, Percy	Merrill. Richland Center	5 2 2 2 3	22	∞ →	888	420	76.38	<b>1</b> 5		81.80 81.80
Chase, A. C. Cole, W. A.	Oshkosh Wisconsin Rapids	82 12	31		166.66 200.00	260	112.44	18		18.40 27.65
Dallman, Royce Diedrich Potor	Argonne	8	127	1 <b>5</b>	150.00	270	47.57	<b>1</b>		26.18
Dockham, F. A	Baraboo	2	<b>'</b> 2;	•	150.00	180	88.98	20;		28.28
Dunnam, Albert Edick, James	Shebovean	<b>3</b> 5	7.7	7	805.00	200 200	126.10	29		15.85
Egan, John	Manitowoc	03	100		20.00		4.68	, eo ç		1.20
Fess, Edward	Whitewater Madison	2 22	88	8	425.00	2008	21.15	11		240 26.75
Fisher, Fred W.	Oconto	81	22		60.00	180	25.80	15		85.80
Hall. A. W	Pountain City	3	7	-	100.00	707	19.10	9 64		3.2
Hanson, Allen	Ladysmith.	12	12		450.00	180	26.86	23	_	7.00
Hope, Lawrence	Eagle Kiver	26	87	N «	150.00	<b>4</b> 20	284.60	111		107.85
Hornberg, Frank	Stevens Point.	82	2	, <del></del>	110.00	270	26.45	12:		7.10
Housen H O	Winter	28	25	4	280.00	077	107.08	31		28 28 28 36 36
Jecke, Louis	Appleton	1	1	,						
Johnson, T. J.	Portage	2,58	<b>3</b> =	es -	881.00	2 2 3	129.82	2 °		67.65 20.70
Jonas, J. W.	Minoequa	8	8	•	800.00	210	121.19	28		56.45
Jones, L. D. Keeler John G	Ashland	==	=:	•	20.00	<b>2</b> 10	8.20	827		4.8 8.8
Keney, R. A.	Wabeno	98	98	•	875.00	810	100.01	*08		48.40
Kramer, Emil	Antigo.	12	æ	∞	20.00	610	69.60	==		18.75
Lake, R. J.	West Bend	8;	æ:	1	78.8	08.	141.91	7:		62.51
Lawrence, C. H.	Phillips	<b>5</b> %	- 8 8		860.00	450	101.00	28		32.72
Long, John	Mellen	5	2	_	770.00	1.046	149.18	; <del>=</del>		14.00
McKeague, H. T.	Rhinelander	9	œ	13	200.00	480	67.22	2		25.40

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Minor, T. Fred	Iron River	16	15		\$ 200.00	330	•		02°	*	6.90
Nixon, Richard A.	Florence	- 45	. 45	- 00	847.50	270		208.98	, g		61.94
Otto, Charles	Tomahawk	8 7	82	0 04		120			70 <b>7</b>		88. 88. 89.
Osburn, William	Kenosha	ន	61	4		225	_		<u></u>		104.34
Peterson, A. J.	Racine	, «	<b>3</b> 4			230 120			4 5		29.19
**Racth, Valentine	Milwaukee	•	. :				: :		91		. :
Randall, F. D.	Waupaca	29	∞ ;	64 (	00 000	8		17.20	₹.		85
Knesume, 1. C.	Rohinson	27	84	-	200	020		165.72	0 <u>4</u>		59.75
Rowe Hallie	Sturgeon Bav	22	:2	10	200.00			00.86	<b>5</b> 9		51.50
Sampson, Andrew	Stoughton	27	23	04	110.00			128.40	-		20.15
Schwalbe, O. J.	Fond du Lac.	16	<b>Z</b> ′	04	100.00	810		21.46	æ ;		8:
Scolman, James	Rice Lake	<b>*</b>	× •	:	33	210		2.45	2;		200
Smith, Ira	Oconomowor	0 12	• 8		8.6	89		20.5	14		69.90
Swift Ernest	Havward	32	32	101	275.00	980		19.22	. <b>.</b>		12.60
Tic, Arthur	Shawano	16	2	-	160.00	096		28.06	<b>∞</b>		8.8
Tiedeman, H. C.	Thorp	<b>~</b>	∞,		15.00	16		7.95	7		96.
Trainer, Daniel	Princeton	ន	8		875.00	081 180		208.95	80		33.05
Waskow, Ben	Beaver Dam	<b>~</b>	25	<b></b>	450.00	88	•	182.17	92		46.45
Weitz, Chauncey	Dieinsold	N 0	7 a	2-	1,000.00	28		10.93	<b>.</b>		12.40
A Orange and a Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the Contract of the	T in the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second	<b>.</b>	•	•	20.00	3			•		
Seasonal Wardens and Personnel with Warden Authority				_							
Adamske, Frank	Three Lakes	2	12	64	\$ 100.00	240	•	86.88	4	•	11.40
Apel, S. A.	Mellen	8	8		825.00	676		20.83	21		11.50
Berquist, H. J.	Prentice	oo t	٠-،		8.8	စ္တ		18.08	- ;	_	9.40 9.40
Dockennagen, John	Park Falls	~ ;	٥	N	33	96	_	20.00	A 0		9.5
Burdon Stanley	Three Labor	3	3 7		3	95		. e	2		S
Campbell, Charles.	Tomah	. 91	. 82	8		100	_	50.03	•	_	17.08
Coxey, Charles	Hurley	2	01			8		18.00	10		4.80
Davison, Evron.	Ladysmith	<b>.</b>	<u> </u>	-		8	_	12.01	7		8.76
Devine, Barney	Madison	, ce	×0 1	-		2	:	00	N	;	:
Evens Frrol F	Fign Creek	o 8	<u>.</u>		88.8	150		20.20	9.6	:	109 67
	Plainfield	3 00	3 🖛	•	8.00	3		20.00	3-		1.65
,	Princeton	900			125.00	180		36.57	• 64		88.9
Gray, Robert A.	Milton	-	-		150.00		_	76.67	<b>60</b> (		24.25
Gunzel, Ralph	Wausau	100	<u>.</u>	1	250.00		_	50.96	<b>60</b> 1		30.15
Hanson, John E.	Brule.	» <u>-</u>	» <u>-</u>	:	35	80	_	4. 7. 25. 58	5ء		25.70 26.10
Helging, John	Radisson	-	-		100.00	38		14.87	100		9.6
Hill, Arthur	Eagle River	00	81	_	90.00	8	_	2.5			1.26
Hillicker, Earl.	Boulder Jct	- 2	-		10.00	180	_	9.00	<b>-</b>	_	8.75

INDIVIDUAL WARDEN RECORDS-1934-1935-Continued

Warden	District	Cases	Won	Lost	Fines	Jail Sentence (Days)	Coerts	Seizures	Fees
Seasonal Wardens and Personnel with Warden Authority (Cont.)									
Hoha, Lawrence	Oshkosh	9-	φ.	0	90 30	860	<b>*</b>	4,	\$ 2.20
onnson, Clarence ohnson, Ortis K	Horicon	* 27	12		\$2.00	120	2.79		14.0
Sautz, Erich	Rhinelander	ော	100	-	100.00	8	5.25	1	88
ong, Frank	Sayner	. 2 <u>1</u>	° 25		200.00	80	59.0		81.18
ong, John F.	Westfield	81	81		126.00	06	34.7	-	13
MacLaughlin, C. Moir. Eric	Janesville	s 12	24 62	- 6	125.00	110	4.00	×	25.5
Moore, Frank L.	Gordon	9	9		10.00	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0.0	9	-
Mossberg, Fred	Marinette	2,4	<b>о</b> ъ ч	_	150.00	8	62.5	9	21.0
Peters. William	Antigo		o oc	-	88	- <b>4</b>	10.6		-
eterson, Clarence	Webster	9	<b></b>	-	20.00	9	12.8	22	15.57
Peterson, P. C.	Spooner	12	<b>о</b> ,	ø,	200.00	150	. 22		2
Plante Lean	White Lake	2ء	۵ م			00 CB	200		-
Putman, Elmer E.	Spooner	-	2 40	- 01	20.00	120			· ·
Ringstad, S. P.	Ladysmith	-	-		10.80	022	7.7		<b>→</b>
Ruskauff, John	Осопотомос	g,	<u>-</u>	84			283.7	6	14.
Seymour, Louis	Webster	٤.	<b>.</b>	-	200.00	8	28	9	
proofs Herold A	Oshkosh	14	97	٠.	100.00 88.88	926	2.02		- 6
Straug. Roy L.	Madison	25	2 2	110	265.90	200	9	2,2	3
Werner, Fred	Tomshawk	20	4	-	100.00	8	16.5		9
Whalen, George	Waupaca	18	17	-	116.66	8	6.99	9	15.
Zelinake, Walter	Madison	<b>∞</b>	<b>∞</b>		80.09	8	42.4	œ	18.
Arrests made by other seasonal wardens and nerronnel (Less than									
three arrests)		25	48	<b>®</b>	670.00	321	144.76	9.	62.81
E do F				: ;	1 000		100		

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# INDIVIDUAL WARDEN RECORDS-1935-1936

Warden	District	Cases	Won	Lost	Fines	Jail Sentence (Days)	Costs	Seizures	Fees
Regular Conservation Wardens									
Adamske, Frank	Baraboo	80	88	8	\$ 450.00	210	\$ 94.26	17	\$ 46.80
Adamski, John	Sparts	23	8	103	00.00 <del>1</del>	240	84.76	8	27.98
Apel, Edward	Eau Claire	2	o.		9.69	120	8.99	4,	
Raie Arthur	Menomonie	٥	40		200	26	980.40	200	11.00
Bosworth, E. F.	Merrill	8 00	9 4	- 0:	225.00	000	57.10	3=	17.15
Button, Percy	Richland Center	17	15	101	506.00	120	66.62	26:	41.15
Chase, A. C.	Oshkosh	72	21	<b>~</b>	210.00	540	110.67	71	41.80
Cole, W. A.	Wisconsin Rapids	21	08		825.00	099	91.58	ន	28.30
Daliman, K.	Argonne	80	24		800.00	868	254.77	<b>5</b>	90.29
Diedrich, Peter	Milwaukee	×	on;		99.00	9 9 9	9.07	81°	25.60
Docknam, F. A.	Baraboo	2	I,	20	20.00	920	20.02	<b>3</b> , 4	9.5
Dunnam, Albert	Oshkosh	910	<b>*</b>	84	20.00	25	20.00	; ء	17.85
Polick, Januar	Sheboygan	9,	3.	× •	200.00	012	156.20	<b>;</b>	23.10
Eliott W D	Whitemater	00	₹0	7	39.65	180	200.00	* 2	841 05
Evans, Errol F.	Waheno	38	38		200	36	108.28	25	52.50
Fess. Edward	Madison	12	2	ec	850.00	999	41.60	128	11.85
Field, William	Beaver Dam	5	8	000	454.00	200	118.88	12	47.06
Fisher, Fred	Oconto	03	20		22.00	800	89.86	13	47.35
Giesen, Louis.	Fountain City	18	18		525.00	180	47.10	83	18.84
Hadland, George	Waupaca	φ,	۰ و		8.6		46.80		8.8 8.8
Hanson Allen	T adversith	- 4	- ¥		868	890	8.0	86	89.70
Havner, S. W.	Facilia River	35	25		1 050.00	25.0	877.26	38	206.47
Helaing, John Jr.	Winter	-	; ₹	9 67	20.00	8	8.00	63	8.50
Hope, Lawrence	Hudson	91	7	ø	80.00	515	2.80	2	14.66
Hornberg, Frank	Stevens Point	27	22	81	150.00	186	90.50	81	16.60
Hogiord, Harry	Medford	<b>o</b> ;	<b>30</b> (	-		281	89	20	33
Hougen, H. O.	New Lisbon	4.	200	7	88	017	16.48 8.48	270	35
Tohnson George	Appiecon	0 8	9		35.55	84	148.61	4 8	40.00
Johnson, Ortis K.	Shawano	35	95	o oc	450.00	110	68.89	32	55.80
Johnson, T. J.	Whitehall	2	6	9	20.00	9	82.60	ص	11.80
Jonas, J. W.	Minocqua.	န္တ	98	<b>∞</b>	860.00	880	180.94	2	98.26

INDIVIDUAL WARDEN RECORDS-1935-1936-Continued

Warden	District	Cases	Won	Lost	Fines	Jail Sentence (Days)	Costs	Seizures	Fees	1
Regular Conservation Wardens (Cont.)										
Jones, L. D.	Ashland	21	21			820	\$ 85.90	22		25
Keeler, John	Fennimore	8	2	-	400.00	680	128.10	12		16
**Keeney, R. A.	Wabeno	80	27	61		720	188.64	83		2
Kramer, Emil	Antigo	17	919			180	127.70	87		2:
Lake, K. J.	west Bend	81	S	٠.		3	137.62	7		Í.
Lange, Elmer	LA Crosse	80:	82	<b>~</b>		460	66.17	8		<b>*</b>
Lawrence, Charles	Mellon	41	200	× c		080	10.69	21:		22
More to the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport o	Dhindanda	95	99	90		000	80.00	# E		2 1
MoNeychton Jemes	Canonios	16	P 6	N		1,020	20.02	77		2
Minor T E	Tach Dines	30	30			200	11.00	25	7 6	<u> </u>
Modler Tra	Kowennee	4 «	3 @			707	18.15	17	12.9	2 15
Moir Erio	Jeneralle	-	1			7.5	104	• 0	28.	2 12
Nixon Richard A.	Florence	24	24			487	118 66	2.6	88	3
Oaheakv. Louis	Three Lakes	=	101	- 01		1 950	435.50	2	174.6	2
Otto, Charles	Tomahawk	25	24	-		180	86.43	12	81.1	2
Osburn, William A.	Kenosha	19	18	_		186	161.19	٢	78.8	9
Paul, Hartwell J.	Eagle River.	48	97	64		880	176.11	52	70.9	9
Peterson, A. J.	Racine	19	18			8	298.67	_	88.6	œ
Plante, Leon.	Hayward	88	92	-		150	86.74	8	27.8	9
"Powell, A. W.	Bayfield	01	04			9	6.25	23	8.8	9
Putman, Elmer E.	Spooner	17	11			000	46.92	17	18.8	2
Kandall, F. D.	Waupaca	28	 	٦,		200	7.5	• ;	- 6	2 9
Knesume, I. C.	Mercer	200	38	•		200	160.80	9 9	8.09	2.5
Dome Hallia	Chiragon Ben	85	86			064	103.14 47.66	35	82.5	2 14
Sampson Andrew	Stoughton	3	- 23	-		300	80.50	12	31.7	20
Schlumof, Charles	Fond du Lac.	11	11			08	46.58	4	22.8	2
Schwalbe, O. John	Monroe	6	6			8	19.80	6	18.9	9
Scolman, James	Rice Lake.	18	12	-		150	88.48	_	13.1	0
Simmons, Louis	Webster	92	24	-		380	86.58	93	62.4	83
Smith, Ira	Green Bay	6	۵			6	82.89	10	17.8	9
Stiglbauer, F. A.	Oconomowoc		8·	-		8	71.18	7.	23.62	70
***Tic, Arthur	Shawano		٦.	<del>-</del> :	- 00 02		7.50	<b></b> -	200	99
"Iledemen, H. C.	Thorp	-	-		90.00		- 20.9	-	?. <b>.</b>	2

6.90 40.19 49.95 159.68 8.80 45.25	42.80 8.90 5.55	24.4 7.4.7 7.660 8.86 8.86 8.86 8.86 8.86	10.00 12.65 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	25.55 10.60 8.65 3.75 91.76	8,485.06
•			1 1 1	1 1 1	•
26 26 27 24 21 24 21 24 21 24 21 24 21 24 24 24 24 24 24 24 24 24 24 24 24 24	26 27	· ଫ <b>19 19 1</b> 0 10 10	n nnue 40%	9 6 9 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1,467
24.10 126.18 295.98 198.73 19.60 102.85	88.88 12.90 19.14	19.06 7.50 10.81 19.98 14.80 8.50	6.68 18.70 27.44 27.44 12.20 12.20 8.3.71 81.70	49-89 57.51 7.59 8.67 198.80	\$ 7,962.69
510 90 840 180 270	180 10 240 240	90 90 90 60 60 60	0048 0088 0088 0088	720	24,995
\$ 100.00 485.00 1,175.00 816.00 850.00	10.00 825.00 60.00 20.00	71.00 110.00 20.00 50.00 100.00	10.00 75.00 125.00 40.00 50.00 50.00	260.00 25.00 26.00 567.00	\$ 29,874.50
0110		<b>x</b>	4	2	142
22 4 5 2 4 5 4 5 4 5 5 5 5 5 5 5 5 5 5 5	91449	4412140		128 2 8 4 8 4 8 4 4 8 4 4 8 4 4 8 4 4 4 4	1,953
10 28 53 7 7 7	۵۵44 <i>۵</i> ۱	-4rn545			
			. 12 12 12 12 12 12 12 12 12 12 12 12 12	188 16 5 54	2,095
Princeton Bayfield Luck Luck Plainfield Eau Claire	Brule Horicon Tron River Prentce Tomah		Wabeno         5           Wabeno         5           Bowler         10           Bowler         10           Phillips         2           Friendship         5           Hayward         6           Rhinelander         12           Eagle River         5           Sayner         12           Sayner         12		2,095

* Wardens retired under the new pension law. ** Deceased *** Resigned

WARDEN RECORD TOTALS

Year	Cases	Won	Lost	Fines	Costs	Seizures	Sentences	Per Cent Cases Won
1926-1927 1927-1928 1928-1929	1,210	1,365	89 78 171	\$ 50,885.00 57,068.50 54,475.00	\$ 7,028.48 8,628.82 11,048.76	898 941 1,267	8,810 7,790	89.5 89.5 9.0 9.0
1925-1930 1920-1931 1931-1932	2,212 2,412 2,458	1,874	291 291 426	71,960.00 56,788.65 84,058.00	10, 112.88 8, 485.85	2,188 2,188 2,111	11,551 18,809 80,168	888 82.8 7.8
1982-1938 1988-1934 1984-1985 1986-1936	22,066 20,1967 095 095	1,672	225 295 216 142	19, 788.80 17, 779.60 27, 808.98 29, 874.60	5,410.80 5,908.08 7,484.88 7,962.69	2,210 2,110 1,467	27.448 24.214 22.673 24.995	2000 2000 2000 2000
Total	19, 196	16,956	2,141	\$420,426.48	\$ 87,100.45	16,484	179,698	88.8

# FEDERAL COOPERATION

# SUMMARY OF ECW ACCOMPLISHMENTS

Type of Project	Northern & Amer. Legion State & Vilas Co. Forest Area 189,798 A.	North- western County Forest Area 848,549 A.	Central Wisconsin County Forest Area 219,212 A.	Oneida- Lincoln County Forest Area 101,988 A.	Runk Taylor County Forest Ares 71,605 A.	Marinette Florence County Forest Area 200,067 A.	Langlade Oconto County Forest Area 76,988 A.	Brule State Forest Area 68,991 A.	Iron County Forest Ares 48,828 A.	Flambeau River State & Price Co. Forest Area 82,146 A.	Total
Foot Bridges. Vehicle Bridges. Barns. Garages. Garages. Loatrines. Lookout Houses. Lookout Towers. Chbing & Filling (cu. yds.).	40-48-800 8	41 8 8222	8 & 812 <b>3</b>	1,767	1,090	<b>ಚ</b> ಹಿಚಚ ∞∞⊣ಳೆ	884	→ 6370 70	9 2 117	4-1 0 04-2	260 260 7 11 11 16 47.5 1,111
Improving and Enlarging Diversion Dams. Contrete Dams (cu. yds.) Barth Fill Dams (cu. yds.) Dams (Biprap) (sq. yds.) Dams (Riprap) (sq. yds.) Fences (rods). Guardrais (rods).	2 4,116 15,697	786 708 100 485.6	14 770 770 8,941 6,836 820 239	6,560	28	1,920	88 88 84.6	1,121	1,792	960	10,220 8,941 6,886 29,557 1,060 8,144.5
Lines (lin. ft.) Spring and Waterholes		2,550		မှ		10		2,200		67	4,750 18
Houses. Camp & rump Houses. Camp Stoves and Fireplaces. Camp Benches. Signs and Markers.	170	63	•	-		-21883		20.			12.5 192 192 193
Table & Bench Combinations. Toolboxes Miscellaneous Improvements Truck Trails (miles) Minor Roads (miles)	91 501 154.7 1.4	270.4	62 62 477.8	41	19.9	22 13 170.8 170.8	86 156.8	8.8 7.	27.8	22 00 00	28 816 584 1,568.6 8.6

# In Memoriam

Peter C. Christensen

November 30, 1936

Custodian, Northern State Forest Began Service with Department January 1, 1912

Robert A. Keeney

April 22, 1936

Jr. Deputy Conservation Warden Began Service with Department April 17, 1932

Valentine Raeth

October 19, 1935

Jr. Deputy Conservation Warden Began Service with Department July 17, 1905

Robert W. Lowerre

April 26, 1936

Laborer Began Service with Department February 2, 1908

Fred S. Haag

July 22, 1935

Jr. Forest Ranger
Began Service with Department
December 1, 1930

Atwood Smith

December 21, 1934

Custodian, Devil's Lake State Park Began Service with Department April 15, 1912

Edward Chapman

December 30, 1936

Semi-skilled Laborer Began Service with Department December 1, 1930







BOUND

UNIV. OF MICH.

